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DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

Motorcycle Helmets Integration Report

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EXECUTIVE HIGHLIGHTS

Report Integration

- The intercept survey findings were supported with the following phases of the social marketing study: Literature review, expert interviews, and focus groups.

Motorcycle Helmets

- Motorcycle accidents accounted for 3,244 fatalities in the nation.
- Head injuries were the leading cause of death among the motorcycle riders.
- Riders without helmets are 40 percent more likely to sustain a fatal head injury.
- Motorcyclists without helmets are three times more likely than a helmeted rider to suffer a traumatic brain injury as a result of a crash.

Acceptance of Society

- There is widespread acceptance that motorcycle helmets decrease the number of rider fatalities, which corresponds to the majority agreeing that motorcycle riders should wear helmets.
- Nearly two-thirds of Hawaii's biker community always wears a helmet while an additional 30% sometimes wears a helmet.
- The estimations of helmet usage among many of the riders is lower than the number reported in the survey findings.
- The estimated number of fatalities each year is perceived to be lower than the actual number of annual deaths among motorcyclists.

Overview of Motorcycle Riders

- About a quarter of the survey respondents have been riding for less than one year.
- A significantly higher percentage of cruisers had more experience than the sports bikers from riding for more than 16 years.
- Most of the motorcyclists rode during the weekdays and weekends, but less than half of each group used their motorcycle as their primary mode of transportation.
- A higher proportion of sports bikers than cruisers took training courses when they first learned to ride their motorcycle.
- Nearly half of the cruisers belonged in a bike club while just over a quarter of the sports bikers were in a club.

Motorcycle Helmet Usage

- Nearly twice as many sports bikers than cruisers on Hawaii's roadways always wear their helmet.
- About half of the cruisers represented in the survey sometimes wear their helmet.
- Over a third of the bikers who currently wear a helmet at least some of the time reported that in the past they did not wear one at all.
- The primary influence for riders to start wearing a helmet was for safety.
- Nearly all of the riders recognized that helmets reduced head injuries.
- More sports bikers than cruisers agreed that motorcycle helmets increased rider safety.
- Significantly more sports bikers than cruisers agreed that riders should always wear a helmet.

Motorcycle Helmet Arguments

- Less than one in ten of the riders would never wear a helmet.
- Around half of the respondents agreed that riders were just as likely to die in an accident with or without a helmet.
- More cruisers than sports bikers believed that helmets were not cool or sexy.
- Although there was a relatively low amount, a higher percentage of cruisers than sports bikers wanted to be able to see their friends' faces or have others see their faces while they rode.
- Other arguments against helmets agreed upon by more than a third of the riders included hot weather and not being able to hear or see properly.

Other Safety Tips and Gear

- Important tools and tips for riders included the following: safety gear, awareness of other drivers, safety classes, and defensive driving.
- Nearly all of the riders wore other protective gear in addition to or other than a motorcycle helmet.
- In other safety gear, the top three types most often worn were long pants, gloves, and leather jackets.

Motorcycle Accidents

- Speeding as well as other vehicles were the two primary causes of fatalities among motorcycle riders as perceived by the respondents.
- Half of the sports bikers were in accidents, which was significantly more than the cruisers who were involved in an accident.
- More than three quarters of the sports bikers and less than half of the cruisers were wearing a helmet during their accident.
- Half of the sports bikers who were not wearing a helmet during their accident began to wear one afterwards, which was higher than the 16% of the cruisers who made the behavior change.

Safety Measures to Increase Helmet Use

- The two most favored incentives to increase helmet use were a 25% reduction in insurance costs and free motorcycle helmets.
- Other potential means of encouragement included custom designed helmets and free two-way communicators for helmets.
- The two most effective messages were as follows: "One out of every three motorcyclists die because they were not wearing a helmet" and "Motorcycle helmets are 67% effective in reducing head injuries."
- The other two messages that received a slightly less favorable response included: "By wearing a helmet, you could increase your chance of surviving an accident by 29%" and "Motorcycle helmets reduce fatalities by 30% in accidents."
- Other safety measures that came up during the focus groups were better educational materials, a graduated licensing program, and visuals of accident aftermaths.

Motorcycle Helmet Law

- Less than a third of the sports bikers and cruisers favored a motorcycle helmet law, but over three quarters of the general population felt that there should be a law.
- A high percentage of the riders believed that a helmet law would likely increase helmet use.

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Motorcycle Helmet Study

The Hawaii Department of Transportation contracted SMS to organize a social marketing campaign to increase motorcycle helmet usage. The objectives in the initial stages of the project were to identify attitudes and behaviors toward helmets. The ultimate goal of the study will be to develop influential messages and approaches that would encourage motorcycle riders to wear helmets.

The study was implemented through a series of stages, which started with a literature review and continued with expert interviews, focus groups, and a telephone survey. An overview of each stage is as follows:

- **Literature Review:** Previous research studies and historic data were organized to establish a background on helmet usage.
- **Expert Interviews:** Safety experts and public officials provided their in-depth knowledge on issues concerning motorcycle riders and helmet usage.
- **Focus Groups:** Two focus groups were conducted with motorcycle riders. The first group included cruisers and sports bike riders who always or sometimes wore a helmet. The second group included a mix of riders who always wore a helmet.
- **Intercept Survey:** Two hundred motorcycle riders were approached at motorcycle dealerships, organized bike cruises, and at Campbell Raceway Park.

Findings from each of the four phases have been integrated into this report. Subsequently, a social marketing plan will be written and tested through an e-mail panel with experts and the general public.

Intercept Survey Methodology and Sampling

The survey was conducted from December 2003 to January 2004 with 200 motorcycle riders. The survey participants were intercepted at motorcycle dealerships, bike cruises, and at Campbell Raceway Park. The surveys were administered in person on a one-on-one basis between the interviewer and motorcycle rider. The responses were written into the survey by the interviewer. Once the survey collection concluded, the responses were entered into a data file, which was aggregated and analyzed through SPSS v10.

Overview of the Social Marketing Process

Social marketing is the planning and implementation of programs designed to bring about social change using concepts from commercial marketing. This process will ultimately reshape behavior over time with continuous reinforcement and a multidirectional approach from various points of influence.

Important concepts that construct the foundation for the social marketing process are as follows:

- The objective of marketing is to influence action.
- Action is undertaken whenever target audiences believe that the benefits they receive will be greater than the costs they incur (costs are not restricted to financial costs).
- Programs to influence action will be more effective if they are based on an understanding of the target audience's own perceptions of the proposed exchange.
- Target audiences are seldom uniform in their perceptions and/or likely responses to marketing efforts and so should be partitioned into segments.
- Marketing efforts must incorporate all of the "4 Ps," of marketing:
    - Create an enticing **product** (i.e., the package of benefits associated with the desired action)
    - Minimize the **price** the target audience believes it must pay or compromise in the exchange
    - Make the exchange and its opportunities available in **places** that reach the audience and fit its lifestyles
    - **Promote** the exchange opportunity with creativity and through channels and tactics that maximize desired responses
- Recommended behaviors always have competition, which must be understood and addressed. In this case, the competition would be current behaviors that need to be reshaped. The benefits of current and recommended behaviors must be weighed to assess the influence on the audience's actions.

The marketplace is constantly changing, so program effects must be regularly monitored. In addition, management must be prepared to rapidly alter strategies and tactics through time.

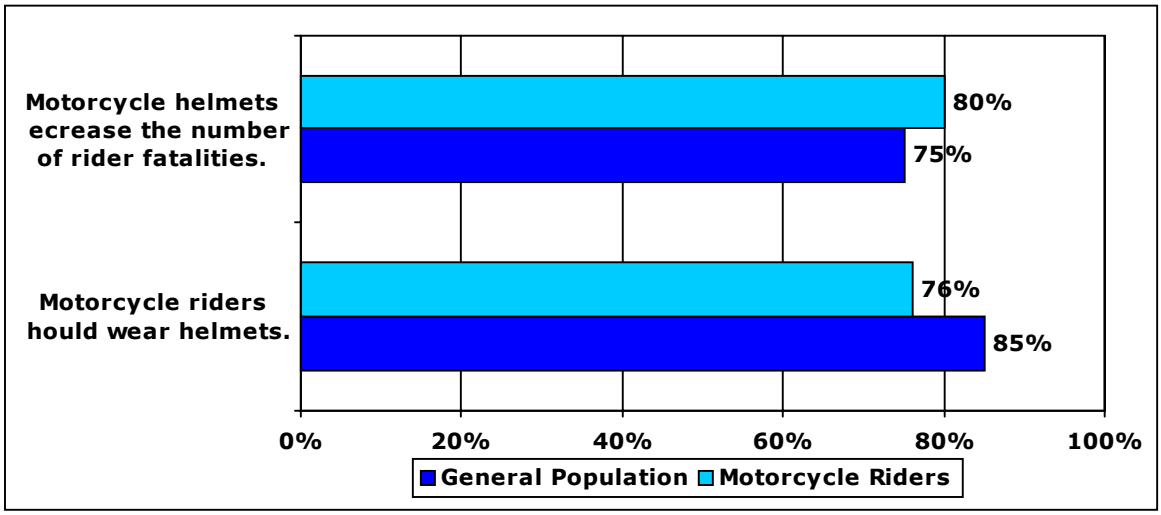
Motorcycle Helmets

According to the National Highway Traffic Safety Administration (NHTSA), there are more than thirty million motorcycle riders in the U.S. In 2002, motorcycle accidents accounted for 3,244 deaths among the riders. Head injuries were the leading cause of death in the motorcycle accidents. In fact, riders without helmets were 40 percent more likely to sustain a fatal head injury. Moreover, a motorcyclist who was not wearing a helmet was three times more likely than a helmeted rider to suffer a traumatic brain injury as a result of a crash.

In 1981, Harry Hurt, a researcher at the University of Southern California, received funding from the NHTSA to conduct a study of over 4,000 motorcycle accidents. Findings from the historic study indicated that riders between the ages of 16 and 24 and female riders were over represented in the data. Also, the motorcycle riders involved in accidents were essentially without training since 92% were self-taught or learned from family or friends.

Acceptance of Society

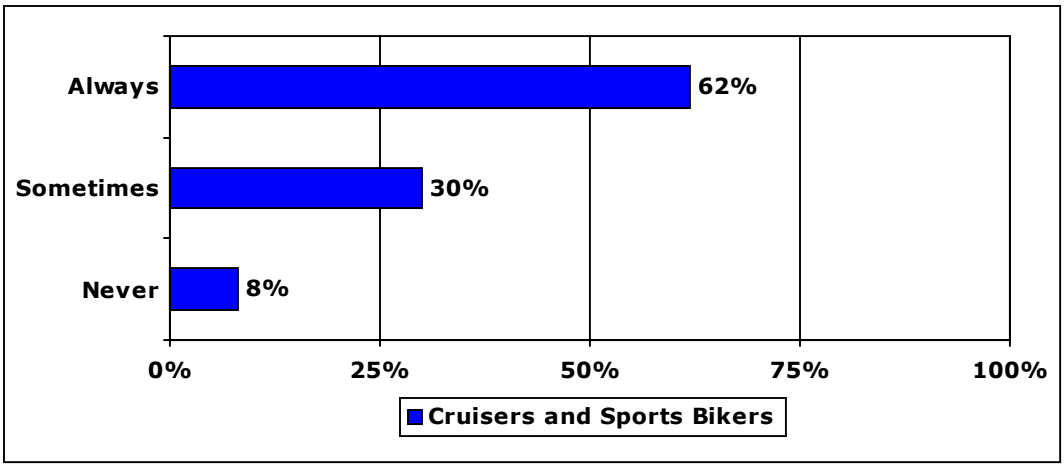
Figure 1. Motorcycle Helmet Benefits



Margin of Error = +/- 6.9% (Motorcycle Riders) and +/- 4.2% (General Population)
Percentages represent "Strongly Agree" and "Somewhat Agree" responses combined

Figure 1 demonstrates the general population's knowledge of and position with motorcycle helmet usage. The general population results were pulled from a separate survey that ran concurrently with a motorcycle rider's survey conducted with the target group. Similar questions were asked of both groups in order to compare attitudes between the public and the riders. The findings show that a slightly higher percentage of the motorcycle riders (80%) than the general public (75%) agreed that motorcycle helmets decrease the number of rider fatalities. On the other hand, a larger portion of the general public (85%) than the motorcycle riders (76%) agreed that motorcycle riders should wear helmets. In both cases, there was majority agreement with the benefits and usage of motorcycle helmets.

Figure 2. Motorcycle Helmet Usage



Margin of Error = +/- 6.9%

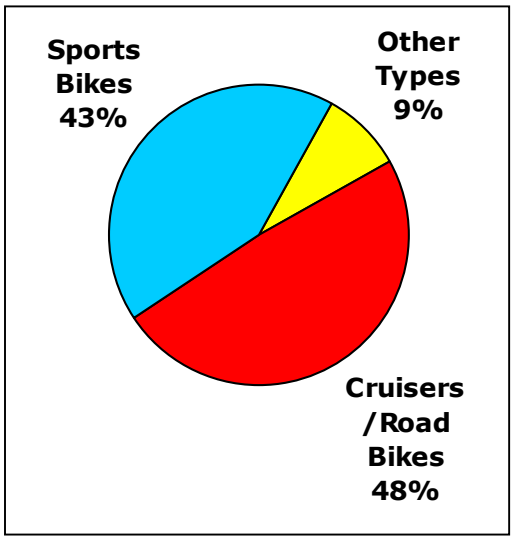
Figure 3. Motorcycle Helmet Usage Projected to Hawaii's Population

	Always	Sometimes	Never
Riders	11,525	5,578	1,487

*Source: Hawaii DBEDT- The Sate of Hawaii Data Book- vehicle registration by type of vehicle

Figure 3 observes overall helmet usage between the sports bikers and cruisers who participated in the survey. The majority of the riders (62%) responded by saying they always wear a helmet, while 30% of the riders sometimes wore a helmet. Less than 10% of the riders (8%) admitted to never wearing a helmet. In Figure 3, the percentages from each category of helmet use are projected to Hawaii's population. There are an estimated 11,525 motorcycle riders in Hawaii who always wear a helmet. The remaining two groups are comprised of 5,578 riders who sometimes wear a helmet, and 1,487 who never wear their helmet.

Figure 4a. Bike Type Segments



Margin of Error = +/- 6.9%

Figure 4b. Bike Type Segments Projected to Hawaii's Population

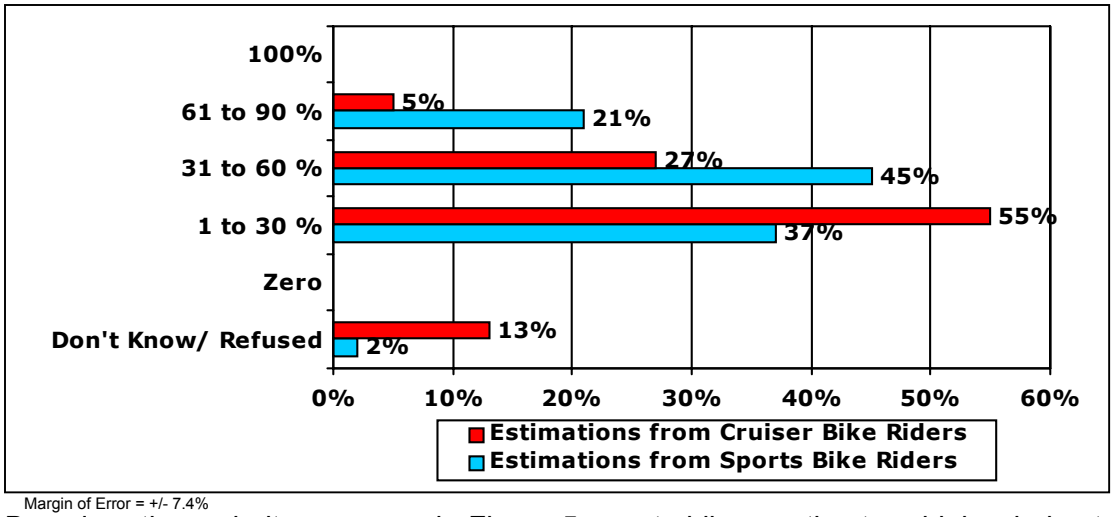
Sports Bikers 43%	Cruisers 48%
8,784	9,805

Figure 4a provides a breakdown of the bike types among the motorcycle survey participants. The riders were segmented in order to separate their attitudes and behaviors. The subsequent

graphs presented in this report will provide a comparison between sports bikers who make up 43% of the sample and the cruisers/road bikers who make up another 48%. There is also 9% of riders surveyed who rode other types of motorized bikes such as all terrain vehicles and dirt bikes. Given the small representation in the other category, these results will not be provided for comparison.

In order to get an idea of the actual size of the two segments, the sample percentages were projected to Hawaii's population based on the number of registered licenses for motorcycles. There are an estimated 8,734 sports bikers and 9,805 cruisers on the Islands. The estimates show that there are roughly one hundred more cruisers on the streets than sports bikers.

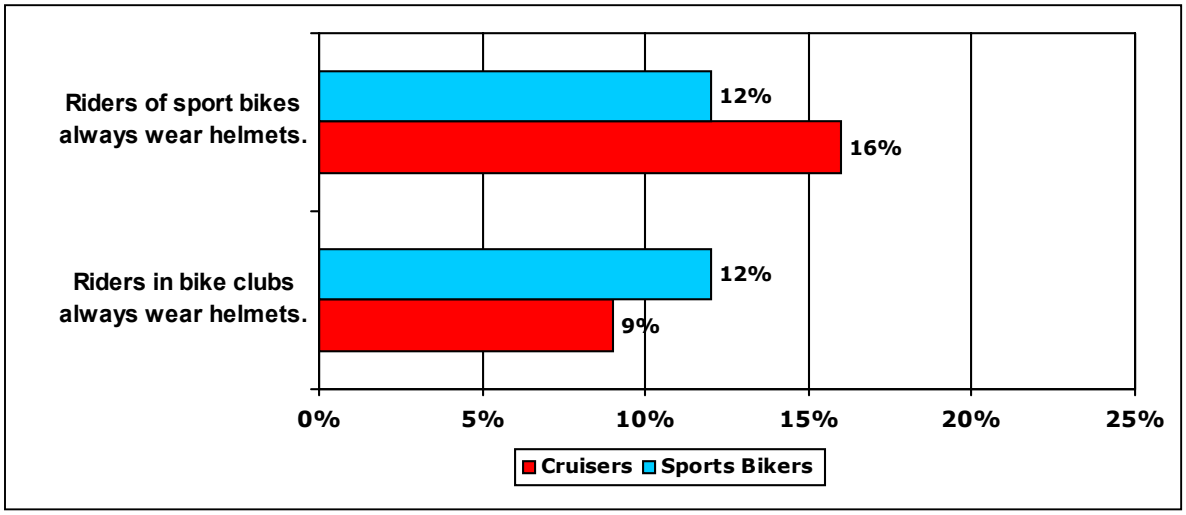
Figure 5. Estimations of Motorcycle Helmet Usage



Margin of Error = +/- 7.4%

Based on the majority response in Figure 5, sports bikers estimate a higher helmet usage rate among all riders when compared to the estimations from the cruisers. Almost half (45%) of the sports bikers believe 31 to 60% of the riders in Hawaii wear a motorcycle helmet. The cruisers perceive helmet usage to be lower with 55% of the segment estimating between 1 to 30%.

Figure 6. Perceptions of Helmet Usage Between Rider Groups

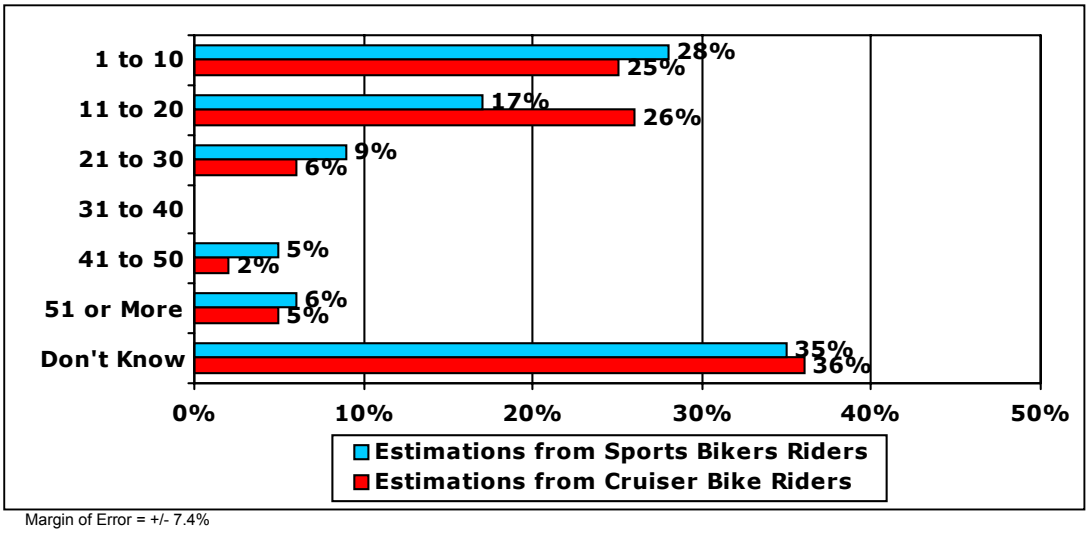


Margin of Error = +/- 7.2%
Percentages represent "Strongly Agree" and "somewhat Agree" responses combined

Figure 6 continues with the varying perceptions of helmet usage between the two types of bikers. Agreement was lower than 20% among the sports bikers (12%) and cruisers (16%)

when asked if sports bikers always wore helmets. Similarly, there were low percentages with 12% of the sports bikers and 9% of the cruisers agreeing that riders of bikes clubs always wore helmets. Bike clubs will be covered later in the report, which provides results of a higher percentage of cruisers than sports bikers belonging to a club.

Figure 7. Estimations of Motorcycle Fatalities Each Year in Hawaii



Margin of Error = +/- 7.4%

About three quarters of the two biker segments were unsure about the estimated number of motorcycle fatalities in Hawaii each year. Of those that responded, 28% of the sports bike riders believe 1 to 10 motorcyclists died each year. The highest percentage of respondents among the cruisers was 26% who believed the annual fatality rate was 11 to 20 motorcycle riders. According to the FARS database, there were 23 motorcycle fatalities in 2002. Based on the majority response, estimations among riders are below the actual number of fatalities.

Transition to Change Behaviors: Transtheoretical Model[1]

People go through a process of changing their behavior. For each person, this change varies in amount of time and transformation process. Below is an overview of each of the five stages in the Transtheoretical Model.

- **Precontemplative**: Individuals in this stage have no intention of changing their behavior in the near future. They are also unaware of the risk they are putting themselves at with their current behavior. In addition, they deny the consequences of their risky behavior.

- **Contemplative**: People are aware that a problem exists and are seriously thinking about overcoming it. The downside is that they have not yet made a commitment to changing their behavior.

- **Preparation/ Decision-Making**: People intend to take action in the foreseeable future and may have attempted to change their behavior in the past.

- **Action**: People begin modifying their behavior, experiences, or environment to overcome their bad behavior. During this stage, their behavior change has been relatively recent.

- **Maintenance**: People are working to prevent relapse and maintain behavior changes over an extended time period.

Based on the general public's and motorcycle riders' attitudes and awareness, it appears that many riders in Hawaii are in the Action Stage for helmet usage. A lot of the riders always wear their helmets, but there is still a significantly lower percentage of riders who need to improve their behavior. To be more specific, the findings show that 62% always wear helmets, and an additional 30% sometimes wear their helmet. Therefore, a large portion of the riders is close to always wearing their helmets with the exception of the 8% who never wear their helmet. Furthermore, the benefit of helmet usage was generally accepted among the majority in the public as well as the motorcycle community. There was also a widespread belief that motorcyclists should wear helmets. On the other hand, many motorcyclists from the sports biker and cruiser segments perceived that there were a lower number of riders who actually wore their helmets. In addition, the motorcyclists under estimated the number of rider fatalities each year, so awareness should be improved in this area.

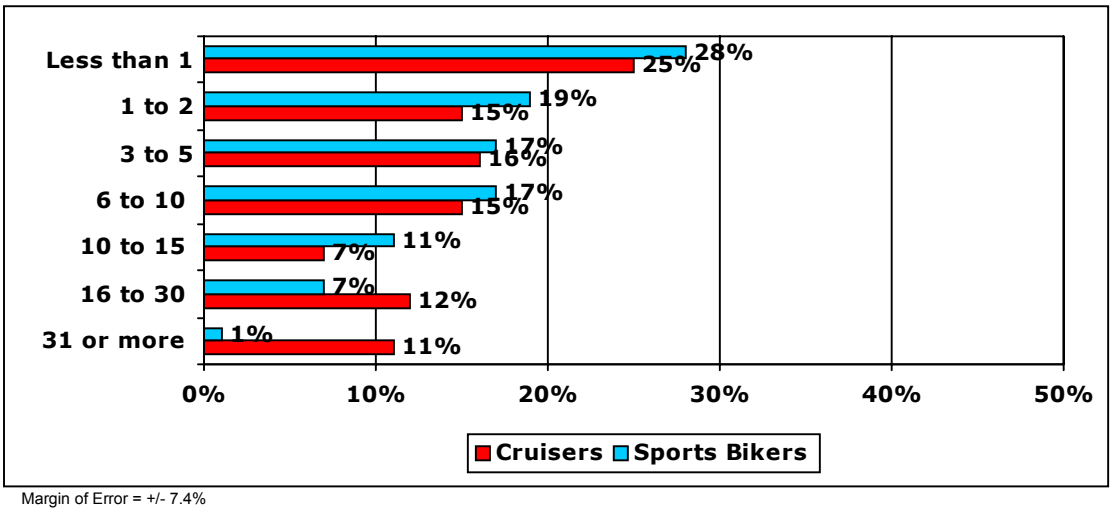
[1] NHTSA (2000)

KEY FINDINGS

Overview of Motorcycle Riders

The series of graphs presented below will provide an overview of the riding habits of the respondents in the survey. In Figure 8, a quarter or more of the cruisers (25%) and sports riders (28%) represented have been riding their motorcycle for less than a year. The results also show that a higher proportion of cruisers than sports bikers have been riding between 16 to 30 (12% vs. 7%, respectively) and 31 or more (11% vs. 1%, respectively) years.

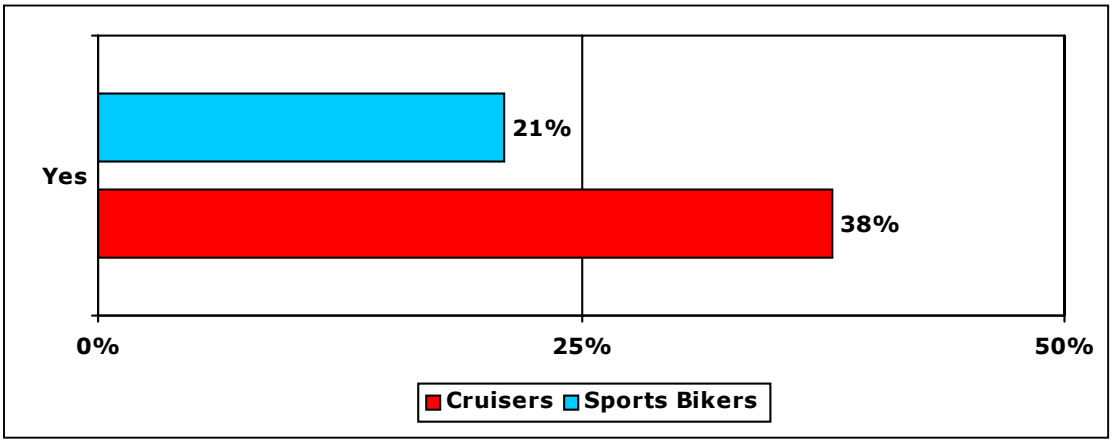
Figure 8. Years Riding Motorcycles



Margin of Error = +/- 7.4%

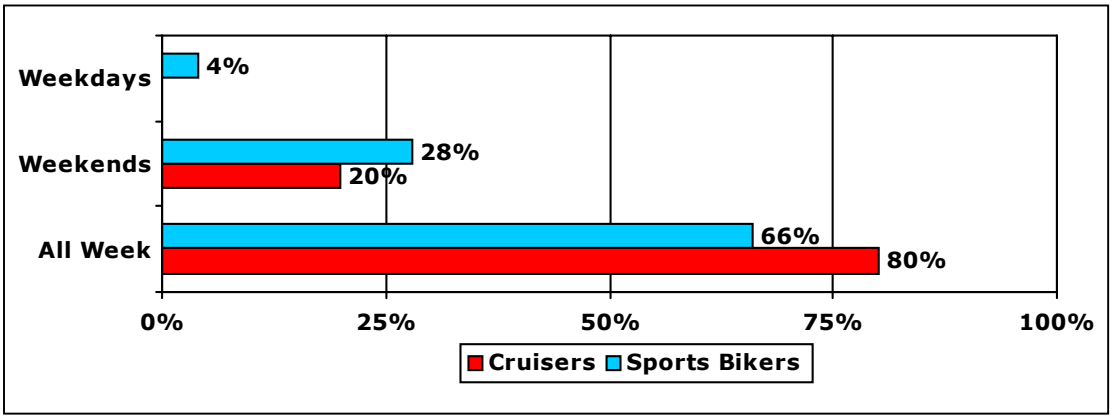
Figure 9 below reveals that 38% of the cruisers and 21% of the sports bikers use their motorcycle as their primary mode of transportation.

Figure 9. Motorcycle Primary Mode of Transportation



Margin of Error = +/-7.4%

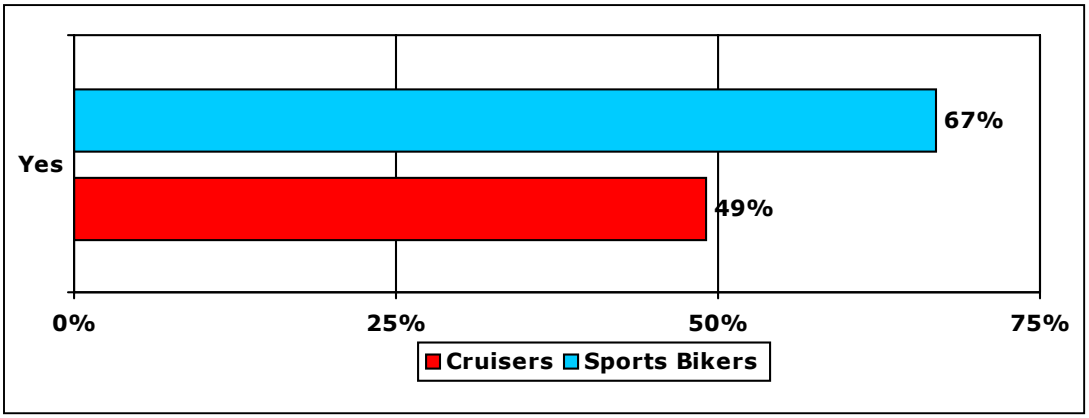
Figure 10. Time of Week Riding Motorcycle Most Often



Margin of Error = +/- 7.4%

The majority of the cruisers (80%) and sports bikers (66%) ride their motorcycle most often during the whole week. The second highest group is comprised of weekend riders, which includes 28% of the sports bikers and 20% of the cruisers.

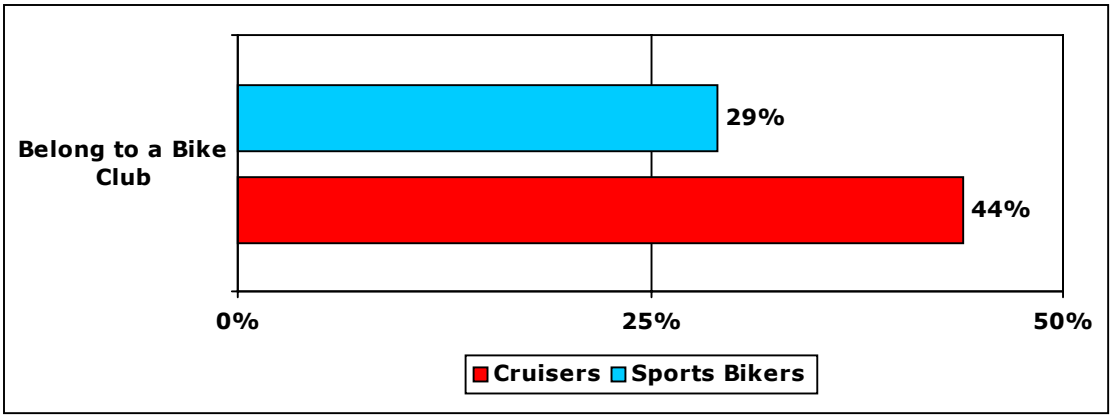
Figure 11. Training Courses When First Learning to Ride



Margin of Error = +/- 7.4%

In Figure 11, two thirds (67%) of the sports bikers took training courses when they first learned to ride. About half of the cruisers (49%) were also trained when they started to ride their motorcycles. As referenced earlier in the report, the Hurt Study concluded that the majority of riders in accidents were without formal training.

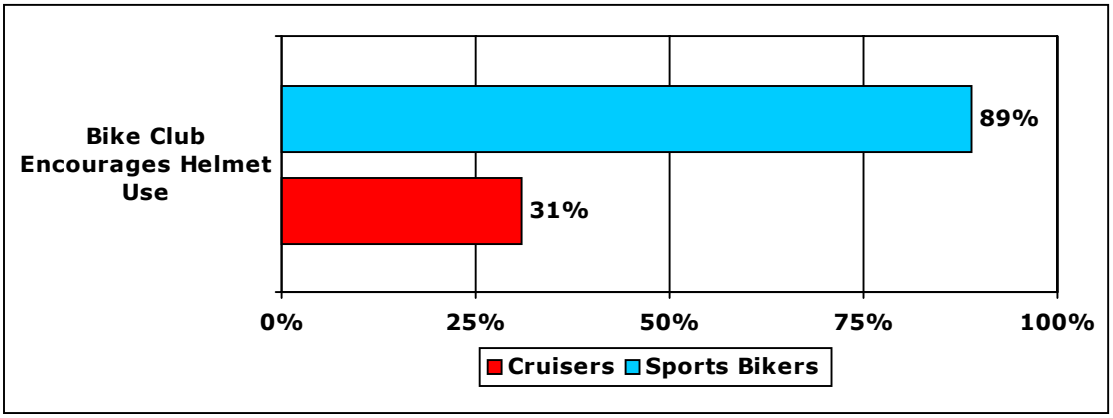
Figure 12. Bike Clubs



Margin of Error = +/- 7.4%

A higher proportion of cruisers (44%) than sports bikers (29%) belong to a bike club. In Figure 13 below, the majority of the sports bikers (89%) who belong to a motorcycle club said that they are encouraged to wear their helmets, while only 31% of the cruisers said their bike club encourages helmet use.

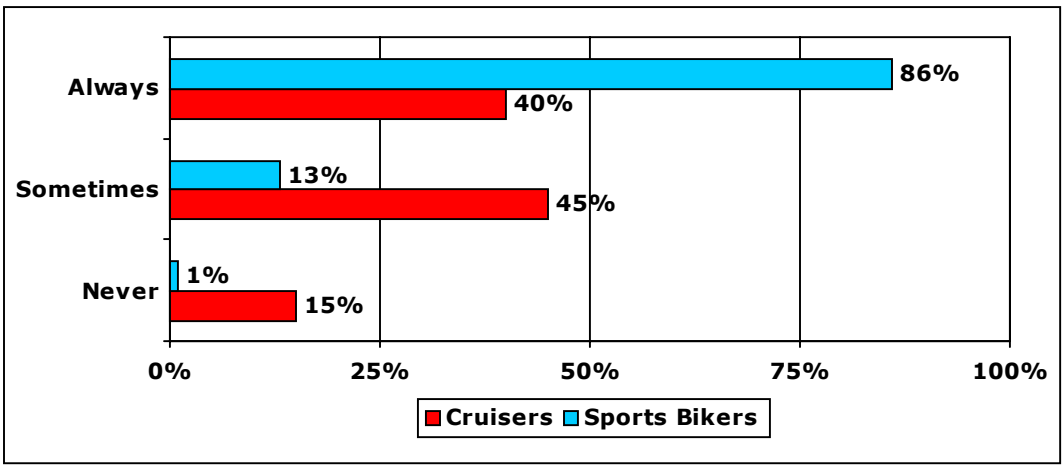
Figure 13. Bike Clubs Encourage Helmet Use



Margin of Error = +/- 11.6%

Motorcycle Helmet Usage

Figure 14. Motorcycle Helmet Usage by Bike Type



Margin of Error = +/- 7.4%

Figure 14 further breaks down the helmet usage percentages between the cruisers and sports bikers. A closer look reveals that sports bikers (86%) make up the majority of the riders who always wear a helmet compared to the percentage of cruisers (40%) who fall under the same category. Nearly half of the cruisers (45%) wear their helmet sometimes, while another 15% never wear their helmet. According to the results in the survey, more than half of the cruisers are the target group to encourage increased helmet usage.

Figure 15. Motorcycle Helmet Usage by Bike Type Projected to Hawaii's Population

	Always	Sometimes	Never
Sports Bikers	**7,554**	**1,142**	**88**
Cruisers	**3,922**	**4,412**	**1,470**

Figure 15 projects the number of helmet users in Hawaii between the sports bikers and the cruisers. There are an estimated 7,554 sports bikers and 3,922 cruisers who always wear their motorcycle helmet. Nearly 6,000 cruisers sometimes or never wear their helmet while riding a motorcycle. The focus groups conducted with motorcycle riders provide more insight into the influence of wearing a motorcycle helmet. A few quotes are listed below, which explain when and why riders wear a helmet:

> "I didn't use to when I was younger. I started wearing a helmet when I got a little more sense, late 20s early 30s. I lot of people I knew were getting smashed and not wearing a helmet. A lot of people died from not wearing a helmet. I know a lot of people that died that way."

> "I feel for the most part that a helmet will help you, but I still don't always wear a helmet."

> "It all depends on what type of riding I'm doing. If I'm out cruising, then I don't wear a helmet. If I know I'm going to do a lot of freeway riding, I'll put my helmet on for sure."

"If I wear a helmet I don't wear a half shell, I wear a full face. Why would I only want half of the protection?"

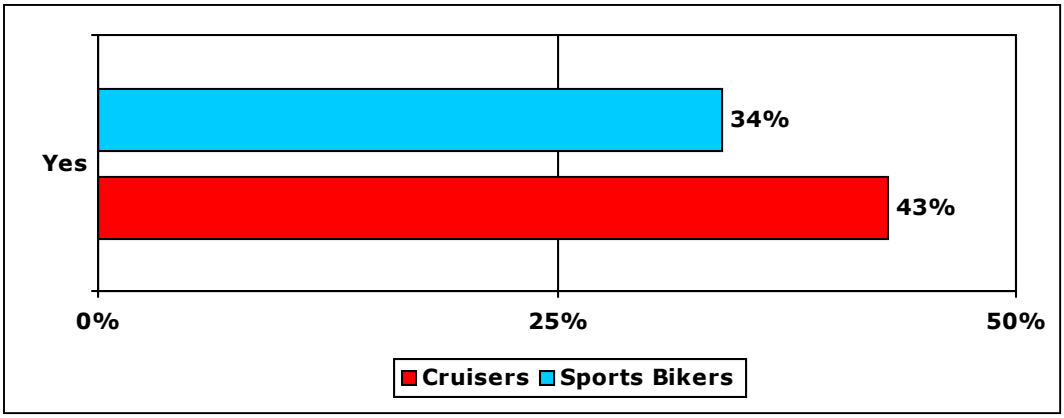
"Many of us started riding in the 60s. There were no helmet laws. It was hard to find a helmet back then, not like it is today."

The focus group participants also reasoned why cruisers rarely wore their motorcycle helmets in the dialogs below:

"You're not going to be able to change that. Harley Davidson advertises to and equips a huge number of riders. Granted they pulled in a large group of money-laden clientele. They've gotten some upper crust folks that want to ride their machines because it's the in thing. They've done a good job marketing wise, and that same marketing program by example generally is you don't wear a helmet and you don't wear full coverage protective gear. The image that they sell and the group you want to sell don't do that."

"I think some people don't because there's a lot of personal choice out there. There're many cultures within the motorcycling community. You got some guys that won't wear a helmet. They'll wear chaps and a vest, but they're probably not going to wear a shirt. They have enough skin hanging out. If they ever fall down, they're going to end up being a donor. That's their culture. If you put a helmet on one of those guys, then they're going to get chided and ridiculed about wearing a helmet. It's not in their culture to do that."

Figure 16. Time When Rider Never Wore a Helmet

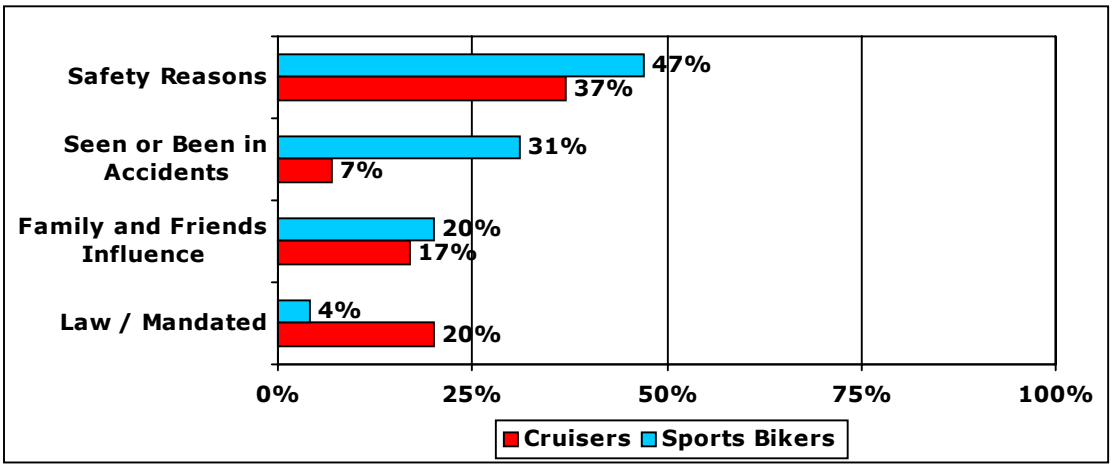


Margin of Error = +/- 8.3%

Riders from both segments acknowledged that there was once a time that they never wore a motorcycle helmet. Almost half of the cruisers (43%) and a third of the sports bikers (34%) said there was a period in which they never wore a helmet.

Figure 17 provides the reasons why the riders started to wear a helmet, and safety reasons was the leading response among sports bikers (47%) and cruisers (37%). Moreover, a higher percentage of sports bikers (31%) than cruisers (7%) were influenced to wear a helmet after witnessing or being in an accident. The other two leading influences for the cruisers were through family and friends and motorcycle helmet laws.

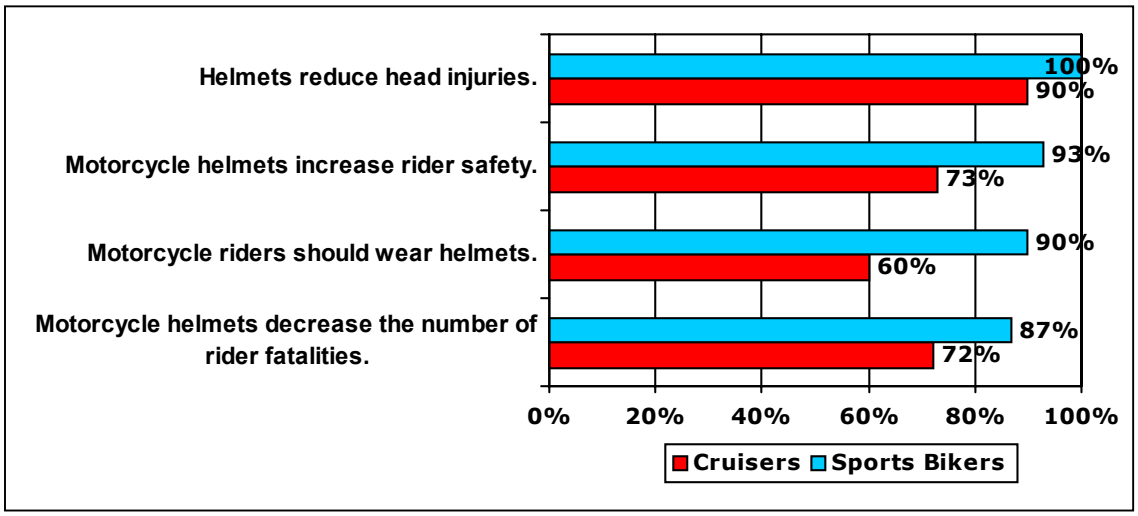
Figure 17. Top Four Influencers for Helmet Usage



Margin of Error = +/- 7.7%

Figure 18 shows that all of the sports bikers (100%) and the majority of cruisers (90%) agreed that helmets reduce head injuries. The gap increases between the sports bikers (93%) and cruisers (73%) on the agreement that motorcycle helmets increase rider safety. Likewise, a lower percentage of cruisers (60%) compared to sports bikers (90%) agreed that motorcycle riders should wear helmets. There was also a significant difference in responses between sports bikers (87%) and cruisers (72%) who were presented with the issue that motorcycle helmets decrease the number of rider fatalities.

Figure 18. Recognizing the Benefits of Helmets

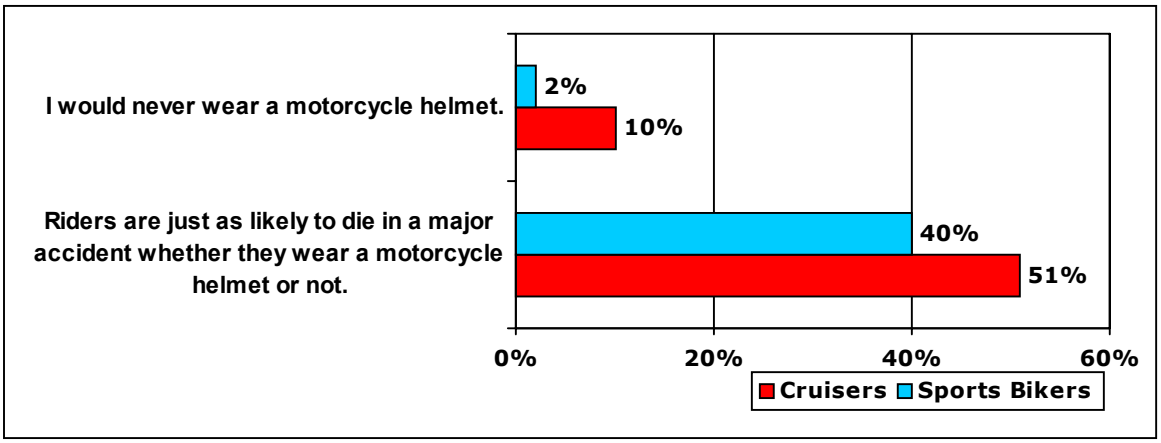


Margin of Error = +/- 7.4%

Percentages represent "Strongly Agree" and "Somewhat Agree" responses combined

Motorcycle Helmet Arguments

Figure 19. Arguments Against Motorcycle Helmets

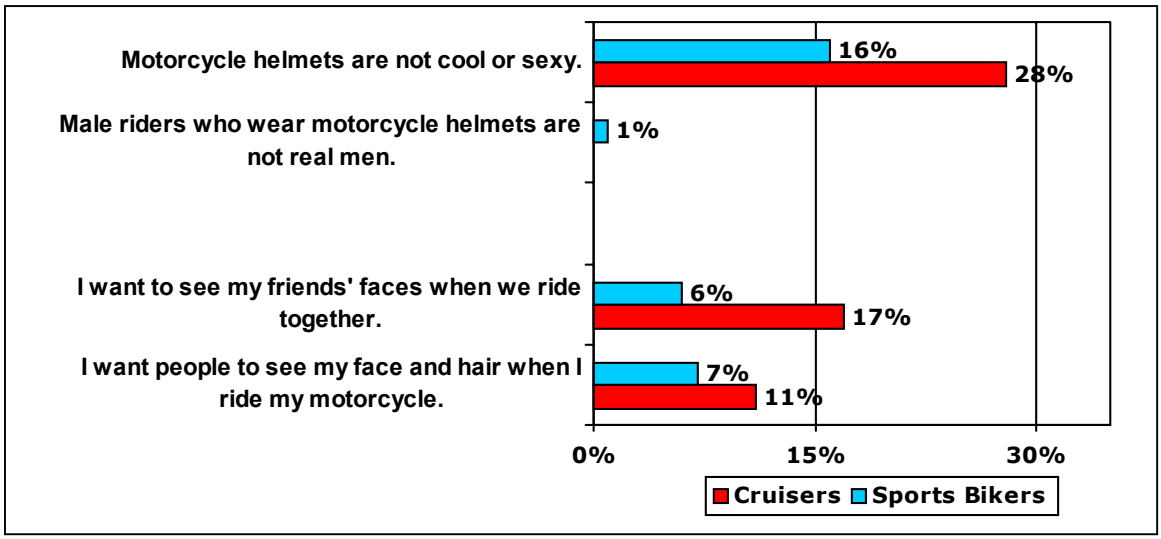


Margin of Error = +/- 7.4%

Percentages represent "Strongly Agree" and "somewhat Agree" responses combined

A relatively low percentage of cruisers (10%) and sports bikers (2%) agreed that they would never wear a helmet. Figure 19 also provides the rider's position on motorcycle helmets in preventing death. Half (51%) of the cruisers and 40% of the sports bikers were in agreement that riders are just as likely to die in a major accident whether or not they wear a helmet. The two groups believed riders could also die as a result of bodily injury or breaking one's neck.

Figure 20. Arguments Against Motorcycle Helmets cont.



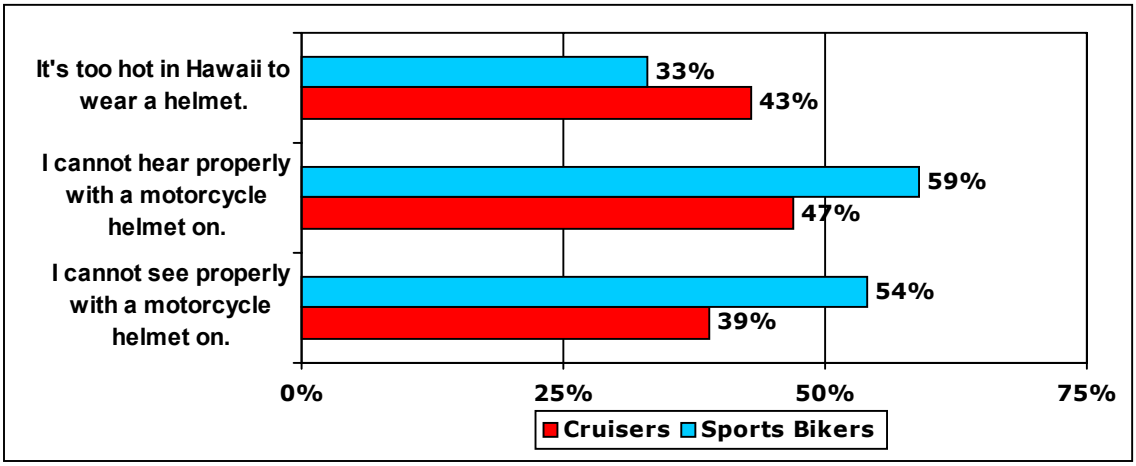
Margin of Error = +/- 7.4%

Percentages represent "Strongly Agree" and "Somewhat Agree" responses combined

Figure 20 continues with arguments against motorcycle helmets. The first two arguments relate to the rider's looks and image while wearing a helmet. More than a quarter of the cruisers (28%) and 16% of the sports bikers agreed that motorcycle helmets were not cool or sexy. Only 1% of the sports bikes agreed that male riders who wear a motorcycle helmet were not real men. The next two arguments ask if helmets are a visual hindrance for others on the road who want to see the rider. A higher percentage of cruisers (17%) than sports bikers (6%) agreed that they wanted to see their friends' faces when they rode together. In a similar question, 11%

of the cruisers and 7% of the sports bikers agreed that they wanted other people to see their face and hair when riding on a motorcycle, which would be prevented if a helmet was worn.

Figure 21. Arguments Against Motorcycle Helmets cont.



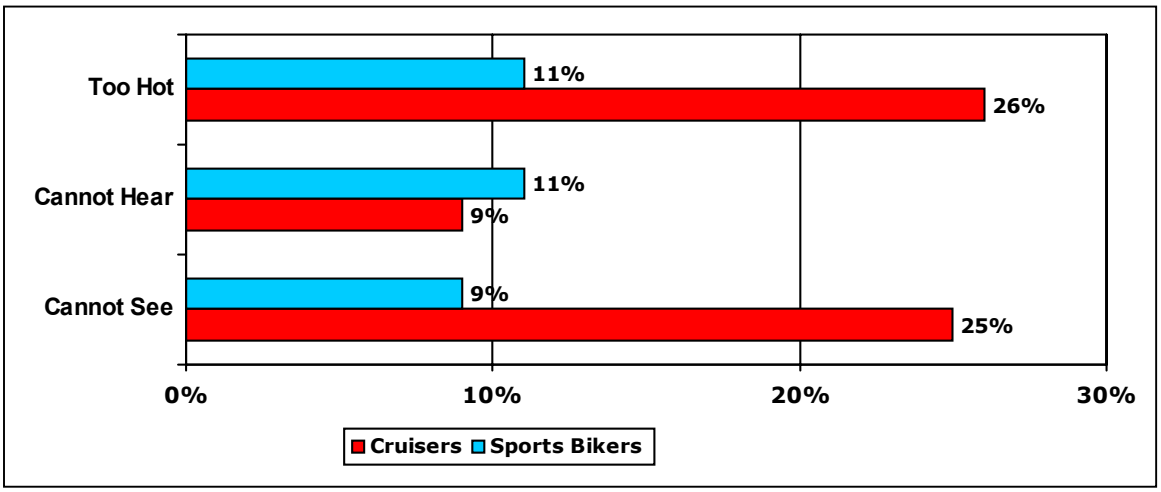
Margin of Error = +/- 7.4%

Percentages represent "Strongly Agree" and "Somewhat Agree" responses combined

Figure 21 continues with a few more arguments against motorcycle helmets. Given the weather in Hawaii, riders where asked if it was too hot to wear a helmet, and 43% of the cruisers as well as 33% of the sports bikers agreed. The next two issues presented to the riders dealt with visual and auditory limitations. Well more than half of the sports bikers (59%) and 47% of the cruisers agreed that they cannot hear properly with a motorcycle helmet on. In addition, 54% of the sports bikers and 39% of the cruisers were in agreement with not being able to see properly while wearing a helmet. Furthermore, the arguments presented in Figure 21 can be supported by the following comments from the focus groups:

> "The weather isn't very conducive for a leather jacket and a helmet in Hawaii. This is a unique riding environment. If it's cold, that jacket and helmet feel good. Over here, a t-shirt is all you really need."
>
> "I feel with the helmet on, you lose a lot of sound."
>
> "The helmet is not helpful for the defensive driving aspect of it. All your senses are cut down. Your vision and hearing is cut down."
>
> "Cutting down a little bit of each of my senses makes me more nervous."
>
> "If I was driving in traffic, I would leave my helmet at home."
>
> "It's a hindrance for safety."

Figure 22. Arguments Against Motorcycle Helmets- Open Responses



Margin of Error = +/- 7.4%

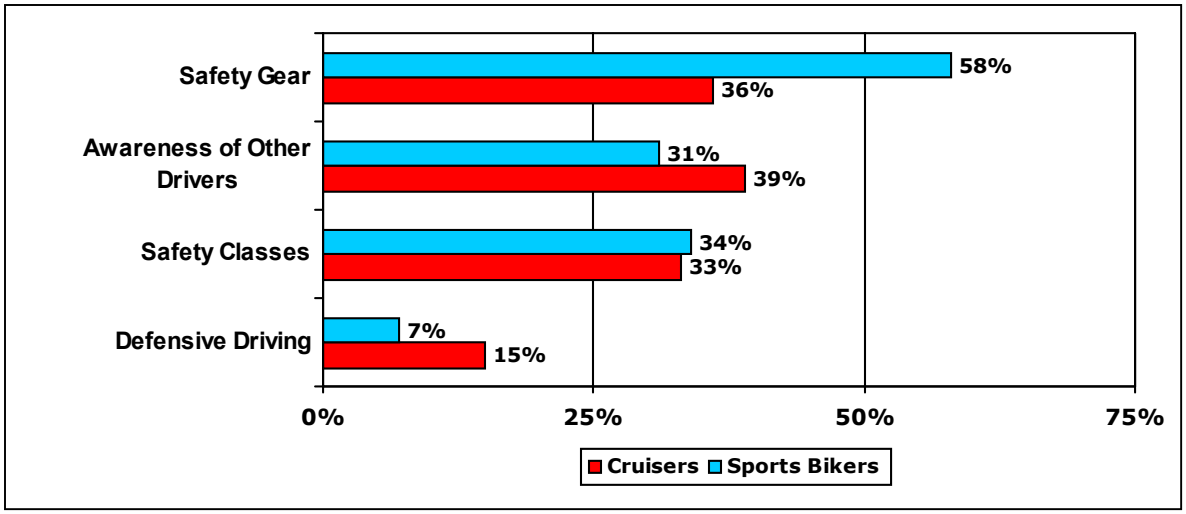
Figure 22 provides open responses from the riders who did not always wear a helmet. The top three reasons are provided, with 26% of the cruisers and 11% of the sports bikers saying that helmets were too hot. The two other leading reasons were not being able to hear or see.

The focus group participants gave additional arguments against helmets in the quotes below:

> "There are some people that are going to think, 'I'm not really going to be going that fast,' and they don't want to spend money on a helmet because they think they're not going to need it."
>
> "Helmets are really hard on your neck."
>
> "Wind resistance changes with a helmet."
>
> "The helmet will give you a nice open casket."
>
> "I would rather die than be a quadriplegic."

Other Safety Tips and Gear

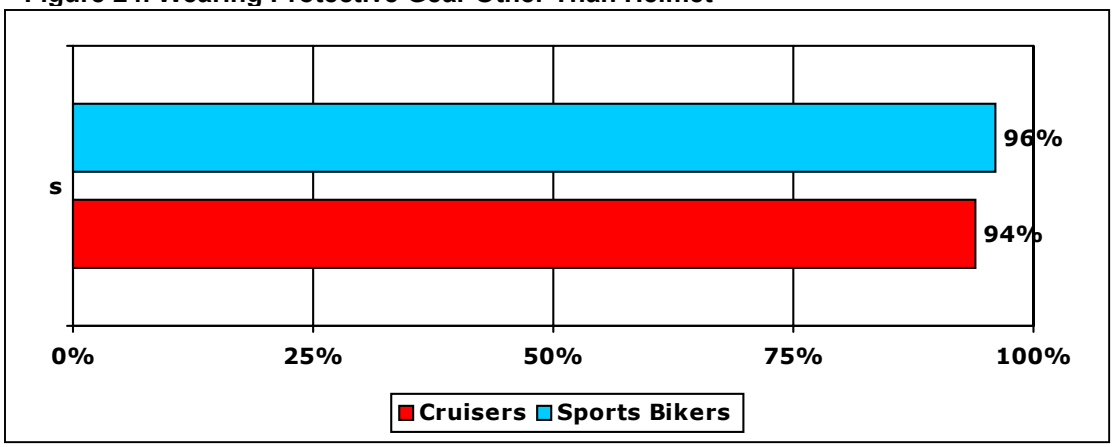
Figure 23. Important Safety Tools or Tips- Top Four Open Responses



Margin of Error = +/- 7.4%

Figure 23 provides the responses for other methods that would make a rider safer. One of the leading responses with 58% of the sports bikers and 36% of the cruisers was safety gear in general. The other top responses were awareness of other drivers, safety classes, and defensive driving, which would all improve the rider's skill.

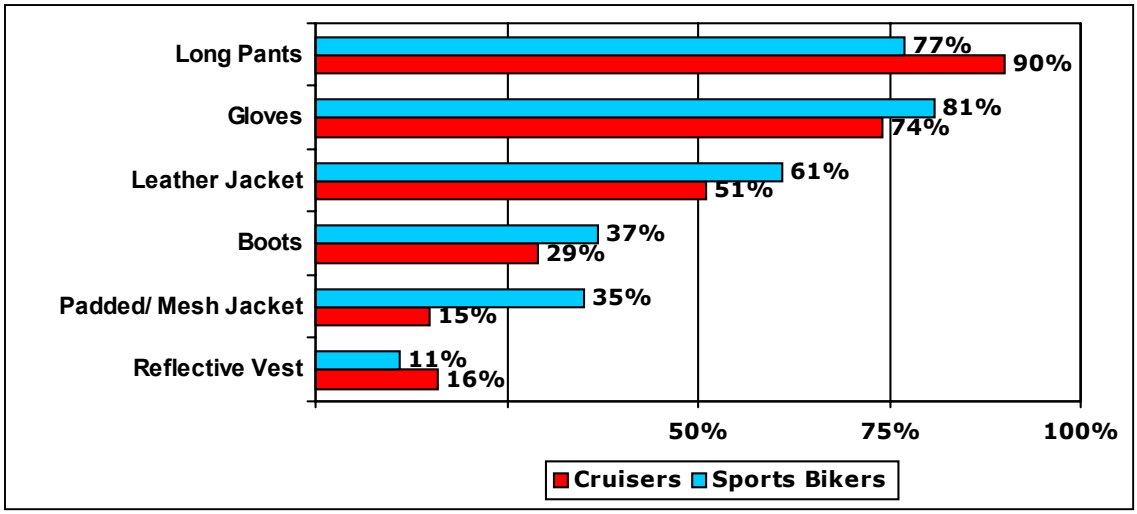
Figure 24. Wearing Protective Gear Other Than Helmet



Margin of Error = +/- 7.4%

Almost all of the sports bikers (96%) and cruisers (94%) wore protective gear other than or in addition to a motorcycle helmet. The results show that riders are willing to wear safety gear more so than a helmet. The following figure covers the responses for the other types of protective gear that are worn.

Figure 25. Other Type of Protective Gear Worn



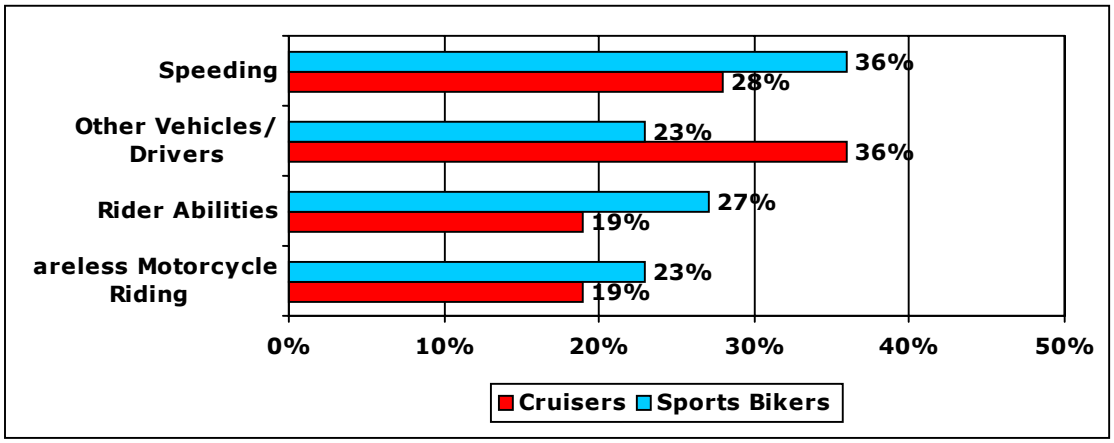
Margin of Error = +/- 7.4%

Figure 25 goes into detail regarding the other types of protective gear the riders wear. Most of the riders wore either long pants or gloves for added protection while riding. In addition, more than half of the riders always wore a leather jacket. Other types of protective gear the riders wore included boots, padded/mesh jackets, and reflective vests. The following comments from the focus group participants explain why they use other types of safety gear:

> "Now I wear a jacket. Before my accident, I never did. I had road rash, and I did not want to go through that again because that's a lot of pain and suffering."
>
> "If I'm on the freeway, I usually wear a helmet. If I'm cruising around town, I wear glasses."
>
> "My main concern is my head, so I never spend the money on gloves or a jacket."
>
> "I have a nice leather jacket, but when I got here, it was too hot to wear it. I did pick up a nice mesh jacket that has all of the body armor, so it' still a very protective jacket."

Motorcycle Accidents

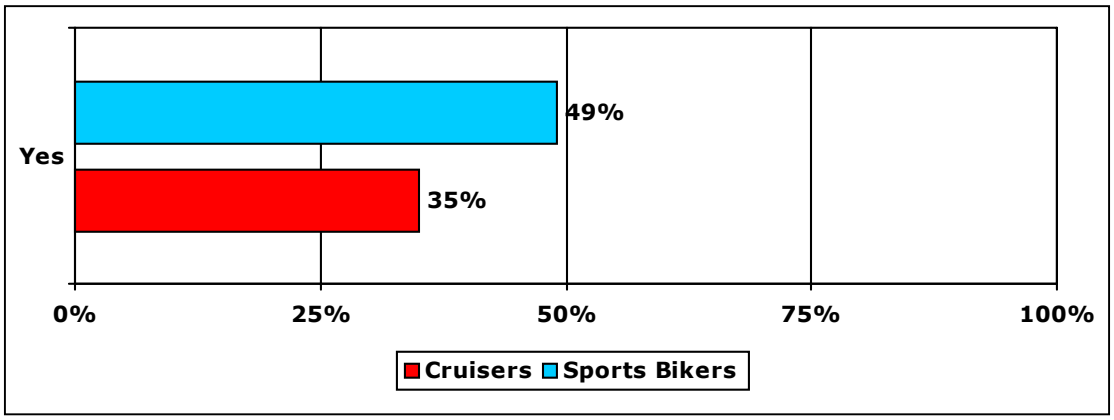
Figure 26. Primary Causes of Fatalities Among Motorcycle Riders



Margin of Error = +/- 7.4%

Figure 26 provides the leading causes for motorcycle fatalities as perceived by the survey participants. A third of the sports bikers (36%) believed that speeding was one the leading contributor to motorcycle fatalities. On the other hand, the highest percentage among cruisers pointed toward others vehicles/drivers as the main reason motorcycle riders lose their lives. Other causes for rider fatalities included rider abilities and careless motorcycle riding.

Figure 27. Motorcycle Accident



Margin of Error = +/- 7.4%

Figure 27 presents the percentage of riders in each segment that have been in a motorcycle accident. A higher proportion of sports bikers (49%) than cruisers (35%) have previously been in an accident while riding their motorcycle. A few comments were selected from the focus group discussions to describe riders' accident experiences:

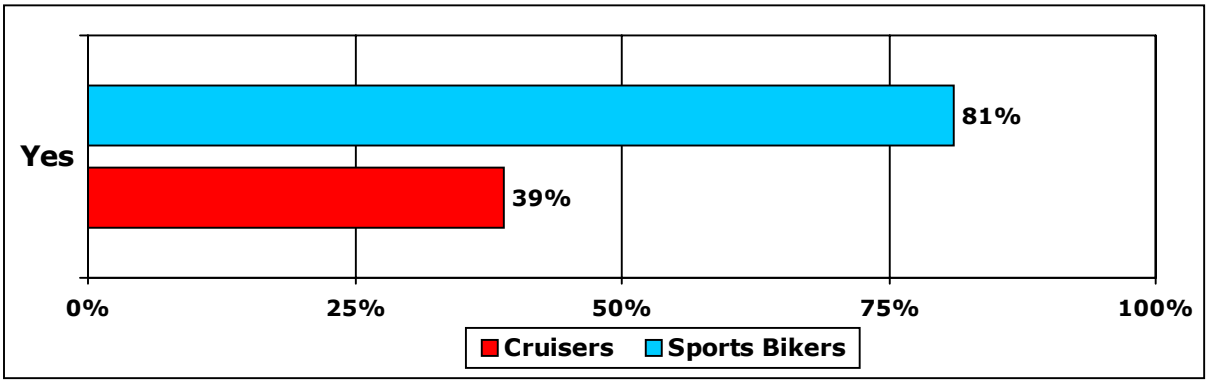
> "Me and most of my friends feel this way. If I am ever in an accident on my motorcycle, it's my own fault. Period."
>
> "Once you see the wreckage, it gets more real."
>
> "There are two kinds of bikers. Those that have been down, and those that are going down."
>
> "I bet anyone that's been riding more than a year. Anyone of us have been close to an accident."

"It doesn't take long to realize that motorcycles as a mode of transportation will get you killed."

"I've been in an accident… Took a turn too hard and the bike slid out from under me. It was more my stupidity.,, I wasn't wearing a jacket or helmet. I was just wearing a t-shirt and jeans. Now, I wear a helmet and full leather."

"I pay attention more. I look what's ahead of me… I was riding with a helmet and a jacket when I got into the accident. I still do now."

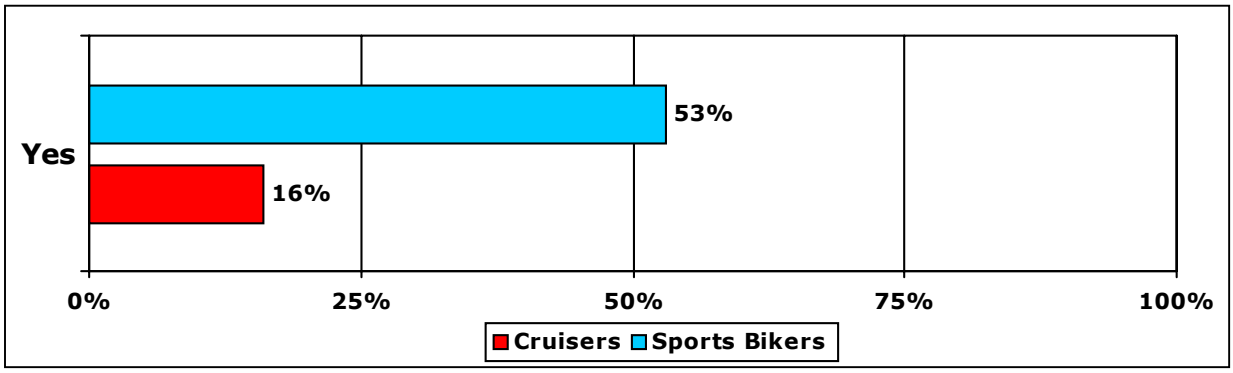
Figure 28. Wearing Helmet During Accident



Margin of Error = +/- 11.6%

Of the riders that were in previous accidents, 81% of the sports bikers and 39% of the cruisers were wearing their helmet during the accident. According to literature reviewed, helmets reduce the risk of death by one-third and are 67% effective in preventing brain injuries to motorcycle riders.

Figure 29. Started Wearing a Helmet After Accident



Margin of Error = +/- 11.6%

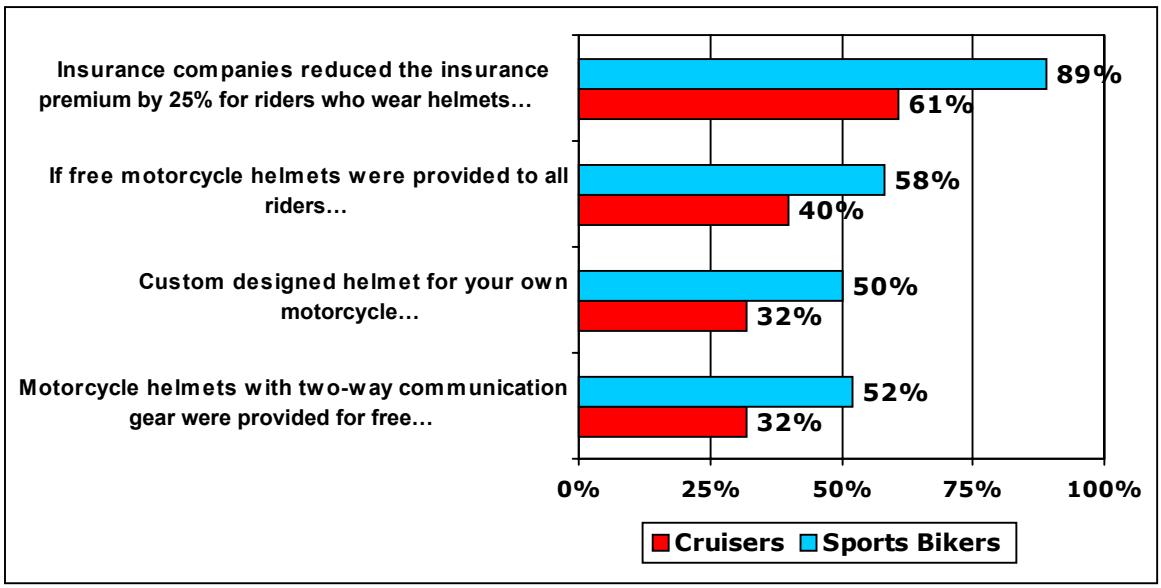
Figure 29 presents the percentage of riders who were not wearing a helmet during their accident but started to wear a helmet after the accident. Half of the sports bikers (53%) and 16% of the cruisers changed their behavior after their accidents. Moreover, a couple of focus group members recalled their accidents and noted if they began wearing a helmet:

"When I was younger, I got into wrecks, and the helmet saved my face, but that didn't cause me to keep wearing a helmet."

"I started wearing a helmet after the accident… I've got two little kids, and I'm not indestructible. I want to be there for them."

Safety Measures to Increase Helmet Use

Figure 30. Proposed Suggestions to Encourage Helmet Use



Margin of Error = +/- 7.4%

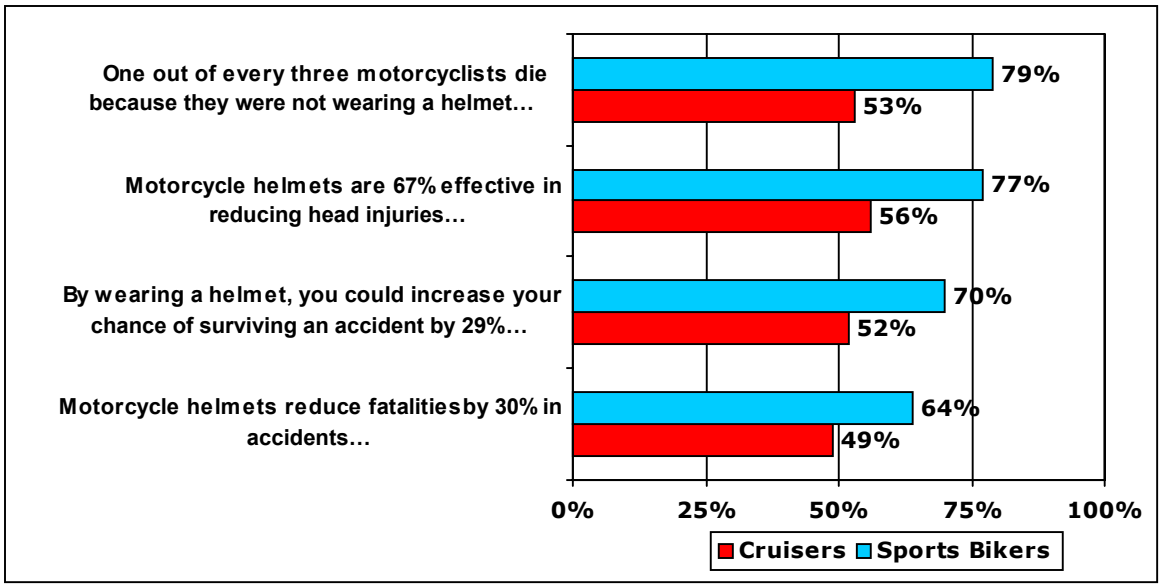
Percentages represent "Very Likely" and "Somewhat Likely" responses combined

Figure 30 presents the results of four approaches that were asked of the riders to find out which ones were likely to encourage helmet use. The idea of insurance companies reducing the insurance premium by 25% for riders who wore helmets was favored by 89% of the sports bikers and 61% of the cruisers who felt it would likely increase helmet use. A couple of the participants gave feedback on a similar idea that was presented during the focus groups:

> "I would see some backlash, 'Oh, you weren't wearing a helmet, so you're not covered.'"
>
> "The only way people would take initiative to do something is if we benefit from it. Yes, you get the benefit that you're going to live, but they can't see that. They want to see something that like, 'Oh, we're going to knock off $80 from your insurance policy."

Continuing with Figure 30, another safety measure presented to the riders was if free motorcycle helmets were provided to all riders, which produced a favorable response among 58% of the sports bikers and 40% of the cruisers. Two other possible means of encouragement included custom designed helmets and free two-way communication inside helmets, with about half of the sports bikers and a third of the cruisers believing both incentives were likely to increase helmet use.

Figure 31. Proposed Suggestions to Encourage Helmet Use cont.



Margin of Error = +/- 7.4%

Percentages represent "Very Likely" and "Somewhat Likely" responses combined

Figure 31 continued with helmet use encouragement and tested a few statistics-related messages with the riders. One of the messages that demonstrated some impact with about 79% of the sports bikers and 53% of the cruisers was, "One out of every three motorcyclists die because they were not wearing a helmet." Riders seemed to favor this message because they were able to easily understand the ratio of potential riders who put themselves in danger. Another message with influence among 77% of sports bikers and 56% of the cruisers was, "Motorcycle helmets are 67% effective in preventing brain injuries." The two messages that had lower likelihoods of encouraging helmet use were as follows: "By wearing a helmet, you could increase your chance of surviving an accident by 29%" and "Motorcycle helmets reduce fatalities by 30% in accidents."

During the focus groups, the motorcycle riders were able to come up with suggestions of their own, which went beyond what was presented in the survey. In the first set of suggestions, the participants gave some suggestions for graduated licensing, which would regulate the motorcycle sizes that inexperienced riders would be able to operate:

> "Implement something like Japan has… You have to get a license for certain size bikes."
>
> "[Graduated licensing] would keep immature riders off a high performance machine."
>
> "I think [graduated licensing] would make a huge impact in the experience level and the differential in their experience level and the performance of the vehicle."

The focus group discussions were able to bring forth ideas on education for both the riders and the drivers, which would increase safety on the roadways:

> <u>Riders</u>
>
> "Make education to get a motorcycle more accessible and more thorough."
>
> "Let them buy a book about motorcycle education. Right now, you can't get a book."

"What you have a hard time doing, for a new rider, someone new to the sport, is translating what they read into how they operate the vehicle. You really need something hands-on."

Drivers

"The current situation in Hawaii you have to be 16 and driving six months minimum. What these driver education programs do is only teach road safety with other cars. They only touch upon motorcycles, bicycles, and pedestrians. They haven't stressed the importance that there are two wheel vehicles that could go faster than you… There isn't enough stress with these kids in class telling them this is what you have to be on the lookout for."

"In Hawaii, you don't even need to be able to read to get a license, so we get people out there that can't take the written test and have to take the oral test who can't read the signs. They can't get a license."

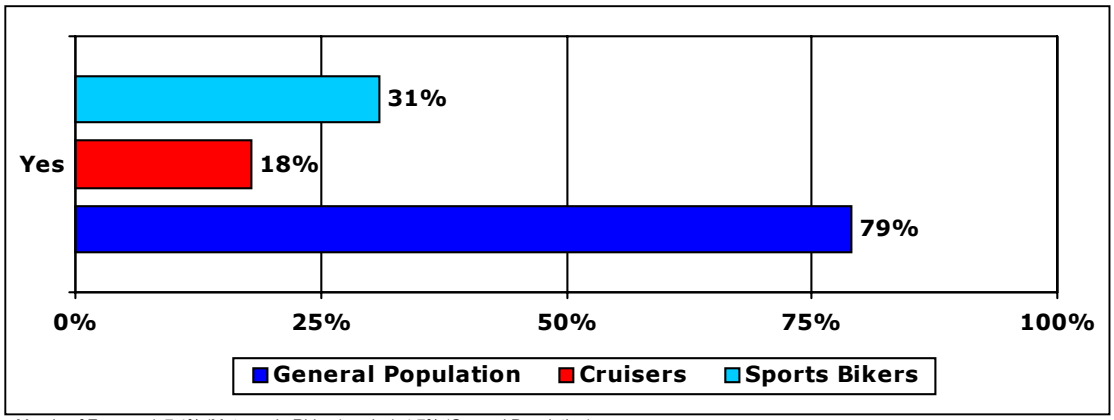
A few other suggestions that came up during the focus groups that were worth noting are as follows:

"Give them testimonials from people who have survived a crash at 50 without a helmet."

"The gore factor. Show them an up close and personal experience of what happens."

Motorcycle Helmet Law

Figure 32. In Favor of Motorcycle Helmet Law



Margin of Error = +/- 7.4% (Motorcycle Riders) and +/- 4.7% (General Population)

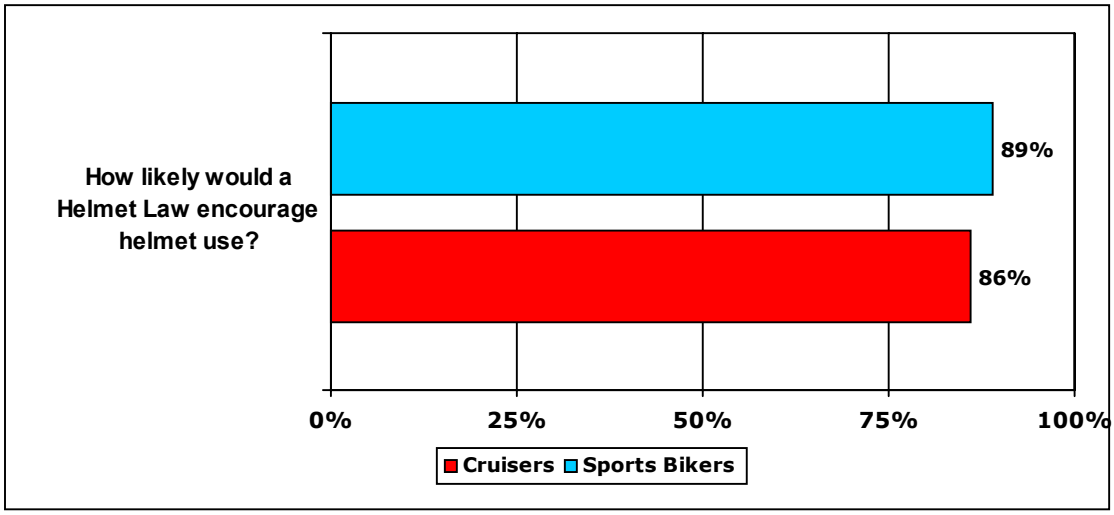
Figure 32 presents the percentage of riders who were in favor of the helmet law. Less than a third of the sports bikers (31%) and cruisers (18%) were in favor of a motorcycle helmet law in Hawaii. On the other hand, 79% of the general public felt that there should be a helmet law. Based on the responses among the motorcyclists, it seems likely that there would be resistance if a helmet law were proposed to legislation.

Reports from other states that have enacted a helmet law proved that mandatory helmet usage reduced the number of rider fatalities. In 1992, the first year of California's all-rider motorcycle helmet law, 327 motorcyclists died in traffic crashes, compared to 512 in 1991 - a 36% reduction

in fatalities in one year. Additionally, the number of hospitalized brain-injured motorcyclists fell by over 50%, from 1,258 in 1991 to 588 in 1992 (California Highway Patrol, 1999; Trauma Foundation, 2002). Furthermore, after passage of Maryland's all-rider motorcycle helmet law in 1992, motorcyclist deaths dropped dramatically - 20% in 1993 and 30% from 1993-1994 (Maryland Department of Transportation). More reports show that the mandatory helmet law in other states was just as successful as findings from California and Maryland. Since 1989, six states (California, Maryland, Oregon, Nebraska, Texas, and Washington) enacted all-rider helmet use laws (Texas has since repealed the law). In Oregon, there was a 33% reduction in motorcycle fatalities the year after the helmet law was re-enacted. Nebraska experienced a 32% reduction in fatalities the first year of its law. Texas experienced a 23% reduction in fatalities; Washington, a 15% reduction; California, a 37% reduction; and, Maryland, a 20% reduction (NHTSA, 2001).

Figure 33 shows the likelihood of a helmet law to encourage helmet use. The majority of the sports bikers (89%) and cruisers (86%) acknowledged that a helmet law would indeed encourage helmet use.

Figure 33. Helmet Law Encouraging Helmet Use



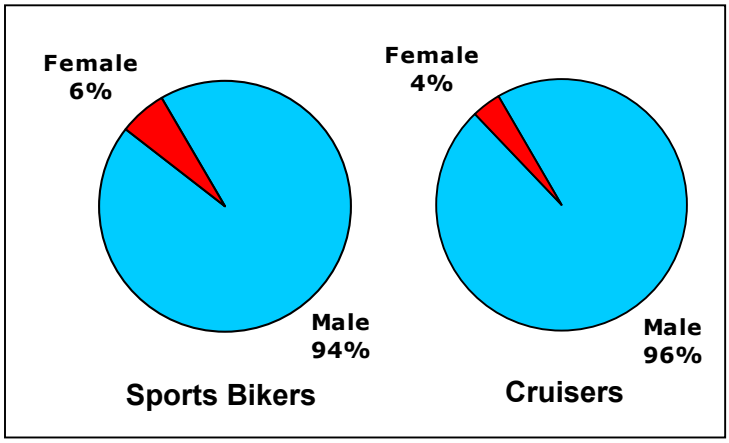
Margin of Error = +/- 7.4%

Percentages represent “Very Likely” and “Somewhat Likely” responses combined

Demographics

This following section of the report presents the demographics of the motorcycle survey participants. The graphs below provide a comparison between the two segments of riders.

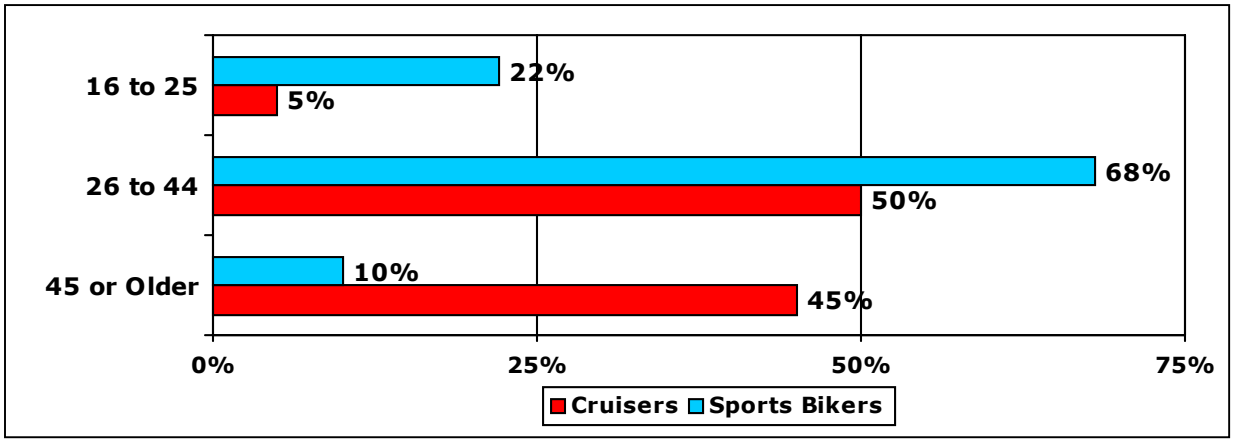
Figure 34. Gender



Margin of Error = +/- 7.4%

In Figure 34, there was a somewhat equal proportion of males sports bikers (94%) and male cruisers (96%) represented within each segment.

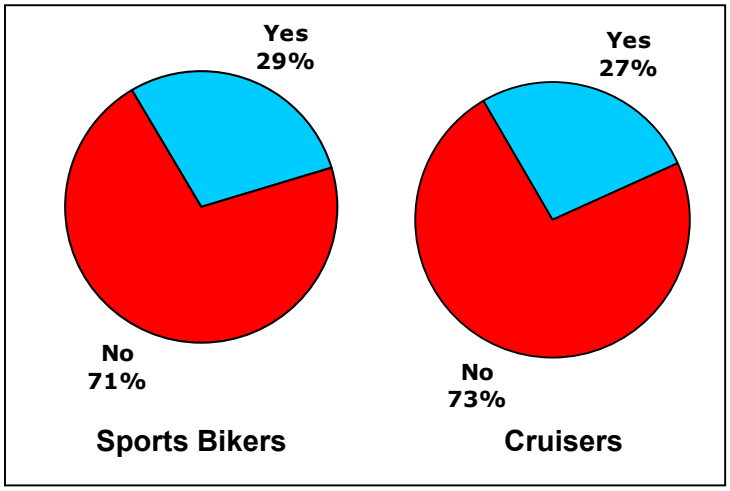
Figure 35. Age



Margin of Error = +/- 7.4%

The majority of the sports bikers (68%) and cruisers (50%) were in the 26 to 44 year old age segment. The highest representation of riders between the ages of 16 to 25 was with the sports bikers (22%) while 45% of the cruisers were over the age of 45.

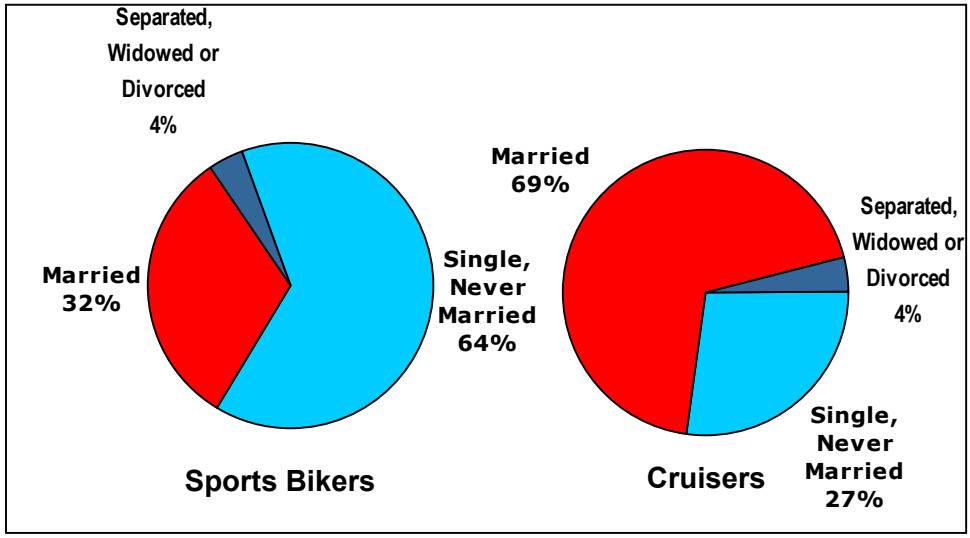
Figure 36. Active Duty Military



Margin of Error = +/- 7.4%

More than a quarter of the sports bikers (29%) and cruisers (27%) were active duty military.

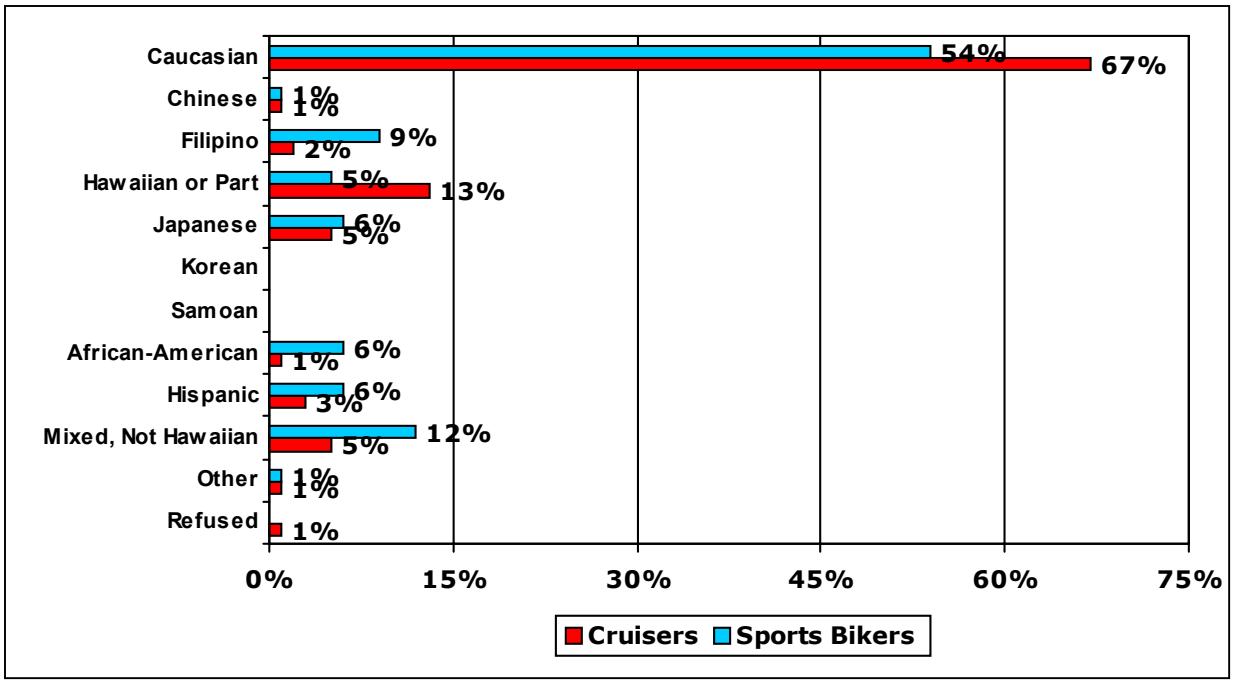
Figure 37. Marital Status



Margin of Error = +/- 7.4%

The majority of the sports bikers (64%) were single, never married while the highest proportion of the cruisers (69%) were married.

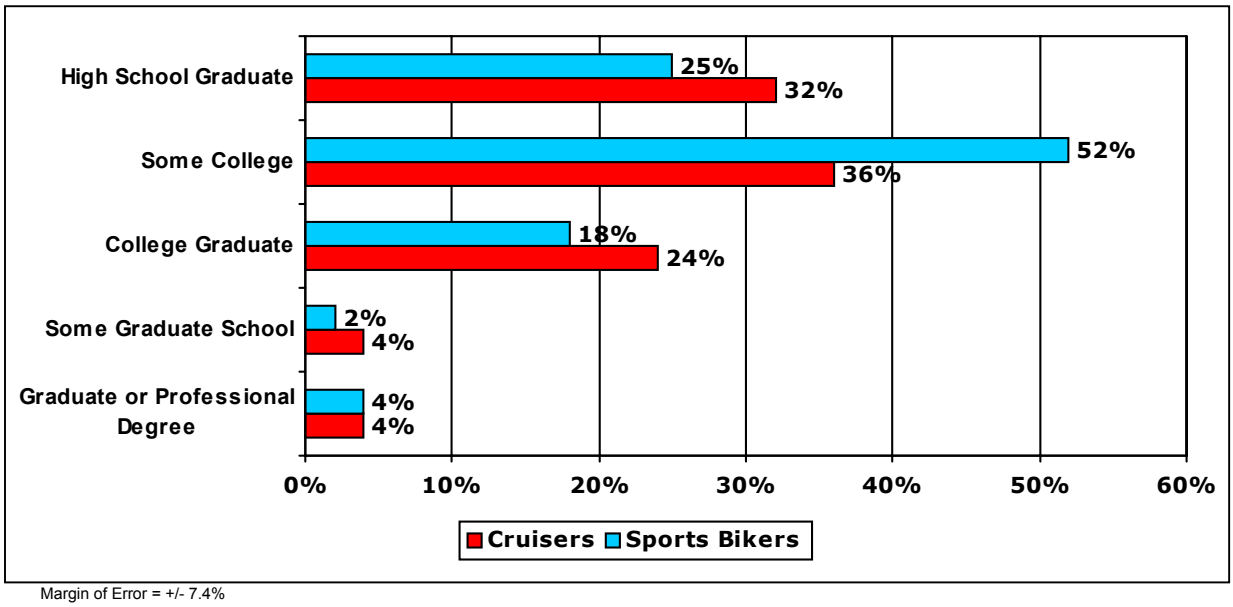
Figure 38. Ethnic Background



Margin of Error = +/- 7.4%

Caucasians represented the majority of the cruisers (67%) and sports bikers (54%). The other leading ethnic groups among the sports bikers were of mixed race or Filipino. The Hawaiians and part-Hawaiians made up the second largest ethnicity among the cruisers.

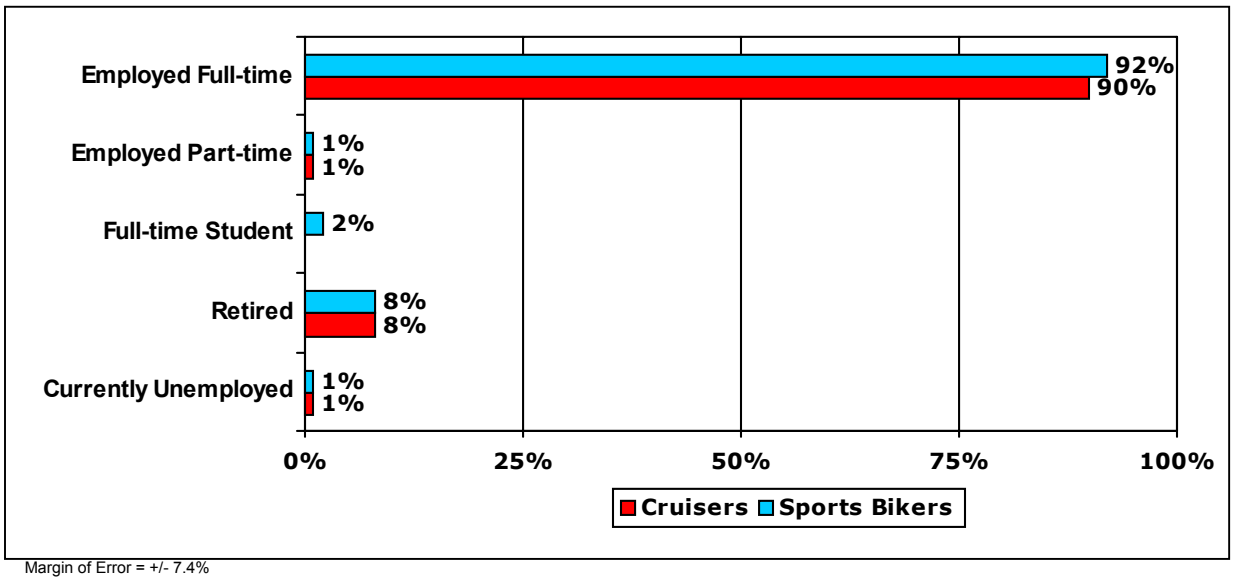
Figure 39. Education



Margin of Error = +/- 7.4%

Most of the sports bikers (52%) and cruisers (36%) who participated in the survey had some college education. A slightly higher proportion of cruisers (24%) than sports bikers (18%) graduated college.

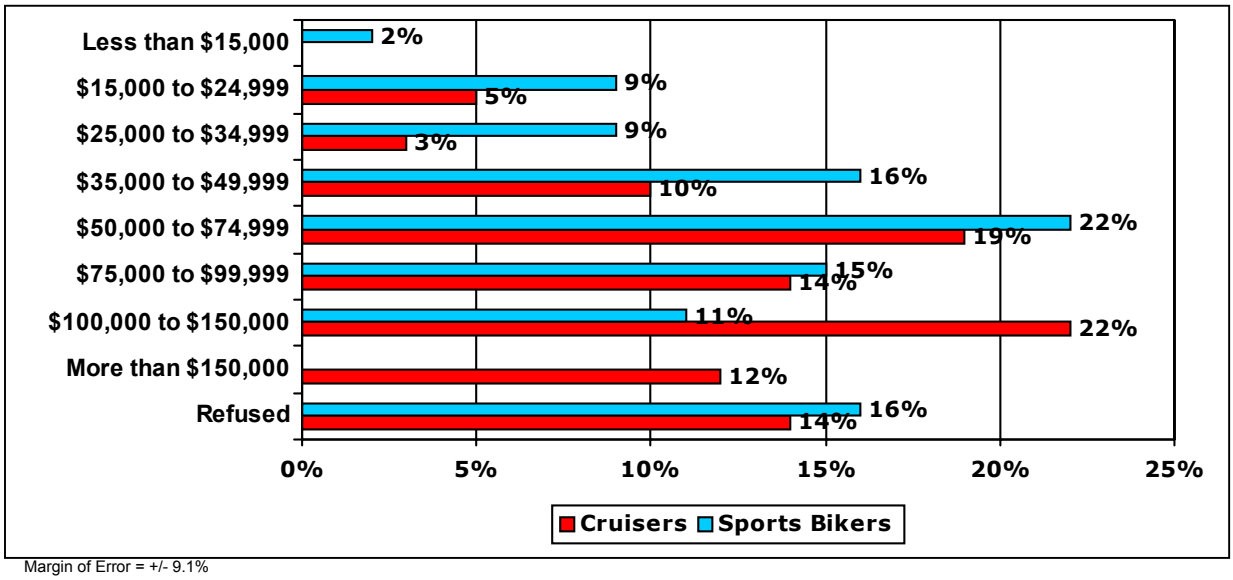
Figure 40. Employment Status



Margin of Error = +/- 7.4%

Figure 40 shows that the majority of the riders who participated in the survey worked full-time, which included 92% of the sports bikers and 90% of the cruisers.

Figure 41. Household Income



Margin of Error = +/- 9.1%

The cruisers tended to have higher household incomes, considering a higher proportion were married and had dual incomes. A close look at the cruisers reveals that 22% had household incomes between $100,000 to $150,000, and an additional 12% earned more than $150,000 within the household. The highest percentage of sports bikers (22%) made between $50,00 and $74,999 for their household income.

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APPENDIX A

Name:	#	**Motorcycle Riders Survey** SMS Research December 2003	Date:
Pau:			LOCATION:
Start:			
Total:			

Hi, my name is _____ and I'm with SMS Research, a Honolulu research company. We're doing an important study about highway safety. May I have just a few minutes of your time?

S1. Do you ride a motorcycle?
[Primary or Secondary mode of transportation]

Yes 1
No ***(THANK & Terminate)*** 2

Q1. [RECORD GENDER--**DO NOT ASK**]

Male 1
Female 2

Q2. How many years have you been riding motorcycles?

Less than 1 year 1
1 to 2 years 2
3 to 5 years 3
6 to 10 years 4
10 to 15 years 5
16 to 30 years 6
31 to 50 years 7
51 years or more 8
DON'T KNOW 9
REFUSED 10

Q3. And how many of those years have you been riding motorcycles here in Hawaii?

Less than 1 year 1
1 to 2 years 2
3 to 5 years 3
6 to 10 years 4
10 to 15 years 5
16 to 30 years 6
31 to 50 years 7
51 years or more 8
DON'T KNOW 9
REFUSED 10

Q4. What type of bike do you ride? Is it a... [READ LIST]

_____

Sports Bike 1
Road or Cruising Bike 2
Dirt Bike 3
Other ***[specify at left]*** 4
DON'T KNOW 5
REFUSED 6

Q5. And what make of bike do you ride?

[READ LIST IF NECESSARY]

BMW 1
Harley-Davidson 2
Honda 3
Indian 4
Kawasaki 5
Suzuki 6
Triumph 7
Other ***[specify at left]*** 8
DON'T KNOW 9
REFUSED 10

_____

Q6. What is the engine size of your bike?

[READ LIST IF NECESSARY]

50 cc 1
51 to 125 cc 2
126 to 150 cc 3
151 to 200 cc 4
201 to 300 cc 5
301 to 400 cc 6
401 to 500 cc 7
501 to 600 cc 8
601 to 700 cc 9
701 to 800 cc 10
800 cc and above 11
DON'T KNOW 12
REFUSED 13

Q7. Is your bike your primary mode of transportation?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

Q8. When do you ride your bike most often? Is it... [READ LIST]

On weekdays 1
During the weekend 2
Both 3
DON'T KNOW 4
REFUSED 5

Q9. Do you belong to a bike club?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

[IF THE ANSWER IS 2, 3, or 4 -- THEN SKIP TO QUESTION 12]

Q10. What bike club do you belong to?

_____

_____

Q11. Does your bike club encourage the use of helmets?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

Q12. Did you take training courses when you first learned how to ride a motorcycle?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

Q13. Is your motorcycle insured?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

Q14. What do you think are the most important safety tools or tips that motorcyclists can use to maximize their safety?

_____

_____

_____

Q15. What do you think are the most common causes of fatalities among motorcycle riders?

_____

_____

_____

Q16. **I am going to read you a series of statements. For each one, please tell me if you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree or strongly disagree.**

	Strongly Agree	Smwht Agree	neither	Smwht Disagree	Strongly Disagree	DK
I want people to see my face and hair when I ride my motorcycle	1	2	3	4	5	9
Motorcycle helmets increase rider safety	1	2	3	4	5	9
I want to see my friends faces when we ride together	1	2	3	4	5	9
Extreme speeding is the major cause for highway fatalities	1	2	3	4	5	9
I cannot hear properly with a motorcycle helmet on	1	2	3	4	5	9
Motorcycle accidents are almost always caused by other vehicles	1	2	3	4	5	9
I would never wear a motorcycle helmet	1	2	3	4	5	9
Motorcycle riders should wear helmets	1	2	3	4	5	9
Riders are just as likely to die in a major accident whether they wear a motorcycle helmet or not	1	2	3	4	5	9
I cannot see properly with a motorcycle helmet on	1	2	3	4	5	9
Riders of sports bikes always wear helmets	1	2	3	4	5	9
Motorcycle helmets are not sexy or cool	1	2	3	4	5	9
Motorcycle helmets decrease the number of rider fatalities	1	2	3	4	5	9
Riders in bike clubs always wear helmets	1	2	3	4	5	9
Male riders who wear motorcycle helmets are not real men	1	2	3	4	5	9
It's too hot in Hawaii to wear a helmet	1	2	3	4	5	9
Helmets reduce head injuries	1	2	3	4	5	9

Q17. Now, I have a few questions regarding helmet use. What percentage of riders in Hawaii do you think wear helmets?

[ENTER 999 FOR DON'T KNOW/REFUSED]

_____

Q18. How often do you wear a motorcycle helmet? Is it... [READ LIST]

Always 1
Sometimes 2
Never 3
DON'T KNOW 4
REFUSED 5

Q19. Is there a reason why?

_____

_____

_____

_____

[IF THE ANSWER TO *QUESTION 18 IS 2 OR 3* -- THEN SKIP TO QUESTION 22]

Q20. Was there ever a time when you did not wear a helmet on a regular basis?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

[IF THE ANSWER IS 2,3, or 4 -- THEN SKIP TO QUESTION 22]

Q21 What influenced you to start wearing a helmet?

_____

_____

Q22. Can you think of anything that would encourage you to wear a helmet on a regular basis? ***[PROBE 3 times]***

_____

_____

_____

_____

Q23. When you buy a helmet, do you check to see if has met safety standards?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

Q24. Do you assume the helmet meets safety standards?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

Q25. Do you wear any other type of protective gear?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

[IF THE ANSWER IS 2,3, or 4 -- THEN SKIP TO QUESTION 27]

Q26. What other types of protective gear do you wear?

Leather Jacket 1
Padded Jacket 2
Reflective Vest 3
Gloves 4
Long Pants 5
Other ***[specify at left]*** 6
DON'T KNOW 7
REFUSED 8

_____

Q27. The next few questions are about your understanding of and experience with motorcycle safety issues.

To the best of your knowledge, how many people die in motorcycle accidents in Hawaii every year?

[ENTER 9999 FOR DON'T KNOW/REFUSED]

_____

Q28. Have you ever been involved in a motorcycle accident?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

[IF THE ANSWER IS 2,3, or 4 -- THEN SKIP TO QUESTION 32]

Q29. What kind of accident was it? Did it involve… [READ LIST]

Motorcycle Damage 1
Physical Injury 2
Both Motorcycle Damage and Physical Injury 3
DON'T KNOW 4
REFUSED 5

Q30. Were you wearing a helmet at the time?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

[IF THE ANSWER IS 1, 3 or 4 -- THEN SKIP TO QUESTION 32]

Q31. Did you start wearing a helmet after the accident?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

Q32. Do you know anyone who has died in a motorcycle accident?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

[IF THE ANSWER IS 2 -- THEN SKIP TO QUESTION 34]

Q33. Was the rider wearing a helmet?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

Q34. I am going to read you a series of statements about the various options that are being considered in order to encourage motorcycle riders to wear helmets.
For each one, please tell me if you think it is very likely, somewhat likely, neither likely nor unlikely, somewhat unlikely, or very unlikely to encourage helmet use.

	Very Likely	Smwht Likely	Neither	Smwht Unlikely	Very Unlikely	DK
If free motorcycle helmets were provided to all riders, how likely do you think that would be to encourage helmet use?	1	2	3	4	5	9
How about if insurance companies reduced the insurance premium by 25% for riders who wear helmets?	1	2	3	4	5	9
And what if people learned that motorcycle helmets reduced fatalities by 30% in accidents?	1	2	3	4	5	9
If you learned that motorcycle helmets are 67% effective in preventing brain injuries?	1	2	3	4	5	9
If you could have a custom designed helmet for your own motorcycle?	1	2	3	4	5	9
If motorcycle helmets with two-way communication gear were provided free of charge?	1	2	3	4	5	9
If you knew that by wearing a helmet, you could increase your chance of surviving an accident by 29%?	1	2	3	4	5	9
If you knew that one out of every three motorcyclists die because they were not wearing a helmet?	1	2	3	4	5	9
If Hawaii passed a state law requiring motorcycle helmets?	1	2	3	4	5	9

Q35. A variety of groups are considering putting forth legislation in the coming session.
Are you in favor of passing a law that would require all motorcycle riders to wear helmets?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

Q36. My last few questions are for classification purposes only.

Which age category do you fall into? Are you...? [READ LIST]

16 to 25 1
26 to 34 2
34 to 44 3
45 to 54 4
55 to 64 5
65 or older 6
DON'T KNOW 7
REFUSED 8

Q37. Are you or anyone in your household on active duty in the U.S. military?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

Q38. How long have you lived in Hawaii? [READ LIST]

Less than 1 year 1
1 to 5 years 2
6 to 10 years 3
11 to 20 years 4
More than 20 years, but not lifetime 5
Lifetime resident of Hawaii 6
DON'T KNOW 7
REFUSED 8

Q39. What is your marital status? Are you…. [READ LIST]

Single, never married 1
Married 2
Separated, widowed or divorced 3
DON'T KNOW 4
REFUSED 5

Q40. What is your ethnic background? [DO NOT READ LIST]

Caucasian 1
Chinese 2
Filipino 3
Hawaiian or part-Hawaiian 4
Japanese 5
Korean 6
Samoan 7
African-American 8
Hispanic or Latino 9
Mixed, not Hawaiian 10
Other ***[specify at left]*** 11
DON'T KNOW 12
REFUSED 13

_____

Q41. What is your highest level of education completed?

[READ LIST IF NECESSARY]

Grade 8 or less 1
Some high school 2
High school graduate 3
Some college (1 to 3 years) 4
College graduate (Bachelor's degree) 5
Some graduate school 6
Graduate or professional degree 7
DON'T KNOW 8
REFUSED 9

Q42. What is your employment status? Are you…[READ LIST]

Employed full-time (35+ hours/week) 1
Employed part-time 2
A full-time student 3
A homemaker 4
Retired 5
Currently Unemployed 6
DON'T KNOW 7
REFUSED 8

Q43. What was your total 2002 **PERSONAL** income, before taxes?
Was it…[READ LIST]

Less than $15,000 1
$15,000 to $24,999 2
$25,000 to $34,999 3
$35,000 to $49,999 4
$50,000 to $74,999 5
$75,000 to $99,999 6
$100,000 to $150,000 7
More than $150,000 8
DON'T KNOW 9
REFUSED 10

Q44. What was the total 2002 income for **ALL** the people in your **household**, before taxes?
Was it….[READ LIST]

Less than $15,000 1
$15,000 to $24,999 2
$25,000 to $34,999 3
$35,000 to $49,999 4
$50,000 to $74,999 5
$75,000 to $99,999 6
$100,000 to $150,000 7
More than $150,000 8
DON'T KNOW 9
REFUSED..... 10

Q45. Thank you so much for your time. We may do other surveys like this one in the future...may we contact you again to participate in an e-mail panel and/or focus group?

Yes 1
No 2
DON'T KNOW 3
REFUSED 4

[IF THE ANSWER IS 2,3, or 4 -- THEN SKIP TO THANK YOU STATEMENT]

Q46. May I please have your name and contact information?

Name _____

E-mail _____

Phone _____

THANK YOU VERY MUCH FOR YOUR HELP IN OUR SURVEY.